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**Letters to KRASNAYA ZVEZDA Editor,
Responses: Aug-Sep 1987**

Subsidiary Farms Can Be More Productive
18010008a Moscow KRASNAYA ZVEZDA in Russian
30 Sep 87 p 2

[Interview with Maj Gen V. Shenin, administration chief, Central Rations Directorate, USSR Ministry of Defense by Krasnaya Zvezda correspondent Maj Yu. Mamchur: "Who Will Accept the Challenge?"; date and place not specified]

[Text] Our correspondent Major Yu. Mamchur acquainted Major General V. Shenin, administration chief, Central Rations Directorate, USSR Ministry of Defense with the letter to the editor published below and asked him to reply to a few questions.

"Our regiment has not taken a single kilogram of meat from the state for 3 years in a row. We are able to supply ourselves with food from our subsidiary farm. Moreover this year we will sell 10 tons to other units. To ones which either do not produce any food at all or do so reluctantly. Ones that are fully capable of providing their own meat if they simply wished to do so. Perhaps not all they need, but at least half. Not to mention the 15 kilograms per person per year that we are supposed to be producing.

"What is it that is inhibiting development of subsidiary farms in the troops? I think that they are limping along in some units because they are treated there as stepchildren, because they are not required to work the way they should, because there is no serious interest in them. But as long as their development is official policy, we must impose the strictest requirements upon them. Rear services officers are not the only ones that should be made responsible. Demands must also be placed on commanders and political workers. And they should be rewarded equally as well. For the moment the only principle we follow is that personnel employed by a subsidiary farm may be paid bonuses equal to 1 percent of the cost of sold products. But once again, why shouldn't this rule not be applied to the officials upon whom the condition of the farm depends to a great degree—the commanders and political workers?

"That's a problem concerned with the system of moral and material stimuli we employ. But now let's look at what a subsidiary farm is from the standpoint of official organization. That may be the wrong way to refer to it, because there is nothing official about the farms. The positions of stock breeders, greenhouse tenders and veterinarians are not foreseen in the regiment. But maintaining a subsidiary farm without them would be unimaginable! What could we do, for example, without Private I. Lyutenko, who graduated from the Kharkov Zooveterinary Institute? And what will happen when he

is transferred into the reserves? Would we be able to find someone equal to him? Why not select agricultural specialists for military units on a legal basis?

"One may object that creating any kind of new official positions would be an impermissible luxury today, in a time of universal reduction of workers. How can this objection be answered? Just six of our soldiers completely satisfy the regiment's demand for meat and vegetables. Just this year alone the profit from selling the farm's products will be more than 70,000 rubles. The conclusion is obvious in my opinion. Moreover we could even get by with fewer people, if we had the necessary equipment. More precisely a Belarus tractor, an excavator, a harvester and waste processing machinery. All we have right now are two carts, a sled and a crusher. We have enough income to obtain everything we need. But there is no place where we can buy the equipment.

"We must significantly restructure the activities of these farms if they are to be truly profitable. It may be that somewhere else, this work has been raised to a level about which we can only dream right now here, and that we are simply unaware of it. We have neither a forum for generalizing this experience nor an organized means of exchanging information. We do not even have a real program of lively competition between subsidiary farms! In this connection I suggest that rather than waiting until such competition is organized for us 'from above,' we organize a test of strength among ourselves.

"Let me be so bold as to challenge, in behalf of the regiment's collective, any other military unit to compete for the best-organized subsidiary farm. Not for the sake of glory or for the sake of honor, but in behalf of our great common cause. Let the country spend less, let more food reach the market shelves, the schools and the children's nurseries.

"Who will accept the challenge?"

Lt Col A. Marchenko, deputy commander for rear services at an undisclosed unit, Order of Lenin Moscow Military District

[Question] Vitaliy Semenovich, let's begin with the end of Lieutenant Colonel's Marchenko's letter. What do you think, will anyone accept the challenge?

[Answer] I have no doubt that someone will. The sincerity, the genuine concern for the common good, and I would say even the cockiness of his appeal are hard to resist. Which means that someone will certainly answer Aleksey Petrovich. And we will welcome this competition in every way possible. It must be said however that the subsidiary farms of the military units are in fact participating in competitions today. In an all-union competition, in an all-army competitive review for the best personal services, and under the sponsorship of districts, groups of forces and fleets. Nor is the Moscow Military District an exception. Moreover an appeal to

the district's personnel was made and high socialist pledges to produce agricultural products were adopted here during a meeting in which the results of last year's competition were summarized. By the way, Lieutenant Colonel Marchenko was even awarded a valuable gift by the district troop commander.

[Question] Then how do you explain his assertion that competition is nonexistent?

[Answer] Let me make the point that he said lively competition. With this adjective in place, things begin to make sense. True, our rivalry today lacks zeal and glasnost. It has not been able to avoid formalism and excessive organization. This is one more confirmation of the fact that things should not always be imposed from above.

[Question] What contribution are subsidiary farms making to fulfillment of the Food Program?

[Answer] These farms produce tens of thousands of tons of meat, and that's not all. Add to this vegetables, milk, eggs and fish. This food is produced on the basis of inexpensive feed obtained chiefly from unutilized natural feedlands—particularly from training grounds, and by collection of food wastes.

But there are other aspects which are sometimes not considered locally. A significant part of the profit from selling food is used to improve the life of the personnel of the units and subunits and to organize extra food for soldiers during training, during field exercises and on holidays. Moreover strong subsidiary farms make units and subunits food-independent, if I may be permitted to put it that way. I don't think there is any need for explaining how significant this is to combat readiness.

[Question] But how do you reconcile this with the fact that servicemen work at some subsidiary farms on an almost illegal basis? Isn't that what Marchenko is saying?

[Answer] This is something that needs to be corrected. According to known requirements first-term servicemen are permitted to work at subsidiary farms only during time off from combat and political training. If this is not enough, maintenance of a small number of laborers and office workers is permitted, within the established service norms. That includes zootechnicians and veterinarians. In this case they are paid out of the assets of the subsidiary farm's fund. This is more likely what Aleksey Petrovich objects to. I know him well. He is an experienced, competent, business-like manager. You might even say he is stingy. His arithmetic is simple: The labor of soldiers is cheaper. But we will not go this route, despite Aleksey Petrovich's tempting calculations.

A soldier should first of all be a soldier, and not a farmhand. Moreover there are many subsidiary farms in the armed forces. You can imagine what would happen if we assigned just a few servicemen to each one of them on an official basis.

[Question] But the author of the letter suggests that the number of people working at the farms could be decreased by supplying them with enough equipment of various kinds. And he complains in this case that there is no way to obtain it.

[Answer] We need to make some clarifications here as well. Automotive and tractor equipment is supplied to subsidiary farms on the basis of orders submitted to the rations service of the district, the group of forces or fleet. If Marchenko does not have a tractor he needs, something is wrong in the rations service of the Moscow Military District.

All other agricultural machinery and equipment, spare parts and other things are acquired through local organizations of the USSR Goskomselkhoztekhnika by the established procedures.

I would like to take this opportunity to caution some comrades from making the mistake of getting carried away with introducing all kinds of machinery and ruling out horses. It is mandatory for every private farm to maintain them. I do not think there is any need to explain why. And it is indeed fortunate that Aleksey Petrovich's farm has carts and sleds.

[Question] Does everything you have said mean that there is nothing keeping most of our military units from providing themselves with their own meat? If not their entire demand, as Marchenko writes, then at least half?

[Answer] Not at all. Many units are located in the Far North, in the Arctic, in deserts and in high mountains. No matter how much they would want to, they would not be able to provide their own meat. But as far as units in favorable climatic zones with natural feedlands available to them are concerned, in principle they can be self-supporting. Moreover we have many military units which have not had to use meat provided by the state for several years, just like the regiment in which Lieutenant Colonel Marchenko serves.

[Question] Does that mean that Aleksey Petrovich would not have a shortage of worthy rivals?

[Answer] The units in which Colonel O. Rikhter and lieutenant colonels N. Volk, B. Pushkarev and G. Sviridov serve can compete with him as equals. I could add many more.

[Question] But officers often have the opinion that a subsidiary farm is an extra burden, that it gets in the way of combat training, and that it reduces combat readiness.

[Answer] On the contrary, experience shows that subsidiary farms are strongest where combat training is at its required level, where discipline is tight and where combat readiness is as it should be. If things are running smoothly in a regiment, then things run smoothly in the entire regiment. And as far as burdens are concerned, I already mentioned the kind of benefits a unit derives from, for example, money accrued from the sale of food products.

[Question] Nonetheless, as far as we know the attitude toward subsidiary farms is, mildly speaking, chilly in a number of places.

[Answer] Yes, unfortunately. And if we talk about what is inhibiting development of subsidiary farms, we should begin namely with the human factor. If for example a district maintains a serious attitude in this area, the results are obvious to everyone. The kind of attitude displayed for example by the Volga, Far East, Baltic and Moscow antiaircraft districts and the Group of Soviet Forces in Germany. And if adequate attention is not devoted to this area, failures are unavoidable. Like in the units in which officers V. Demidik, S. Zakharchenko and V. Klychenko serve. Many subsidiary farms in the Ural and Transbaykal military districts, in the Northern Group of Forces and in the Pacific Fleet require assistance. But encouraging words are not enough. Marchenko is right: We need to get commanders and political workers interested in this area in every possible way, and we need to encourage and reward them more boldly (unconditionally with regard for the overall state of affairs). In a word, we need to do everything we can to focus them on the needs of the subsidiary farm.

[Question] What is your administration doing in this regard?

[Answer] The administration's specialists visit the military units, provide practical assistance, reveal and eliminate shortcomings and, in some places, halt illegal food sales and spending with the assistance of the police.

Each year the Ministry of Defense sponsors an all-army conference on further development of agricultural enterprises and subsidiary farms. Incidentally, one of them was convened at Lieutenant Colonel Marchenko's farm. Similar meetings are held in districts, groups of forces and fleets.

A number of documents that explain and regulate practically all aspects of the activities of subsidiary farms will also help to improve their work. Training films have been sent to the units. Experience is being generalized and disseminated. Though judging from Aleksey Petrovich's letter, not persistently and systematically enough. As for that, we will do what must be one.

[Question] Vitaliy Semenovich, what kind of future do you see for the development of subsidiary farms?

[Answer] Their role will continue to grow, according to recent decisions of the party and government, particularly the CPSU Central Committee and USSR Council of Ministers decree "On Further Development of the Subsidiary Farms of Enterprises, Organizations and Institutions." With time, subsidiary farms will provide significantly larger quantities of products for the soldier's table as a result of highly effective production and fuller utilization of the internal reserves of the military units, the land and the equipment, at minimum labor outlays.

In the meantime our immediate task is to attain the promised 15 kilograms of meat per recipient.

[Question] And when will that be?

[Answer] By the end of the current five-year plan. By the way, if everyone worked like Lieutenant Colonel Aleksey Petrovich Marchenko has, we could have completed this task long ago.

Military Repair Organizations Address Problems
18010008a Moscow KRASNAYA ZVEZDA in Russian
26 Sep 87 p 2

[Article: "From Mutual Reproaches to Interaction"; first two paragraphs are Krasnaya Zvezda introduction]

[Text] A letter from workers of a military repair enterprise discussing what was keeping them from organizing rhythmical work and raising the quality of repairs on truck cranes was published on 23 June. In particular complaints were stated against the motor vehicle repair plant of which Colonel A. Bokarev is the chief for systematically failing to live up to contracts for the delivery of KrAZ-257 truck chassis.

The responses to this letter reaching the editor's office confirmed that an acute and urgent issue was raised. These responses also revealed the causes retarding its final resolution.

"The letter speaks the truth, but not the entire truth": That is what the response from the enterprise headed by Colonel V. Shcherbakov says.

"The letter written by our enterprise's workers and published in Krasnaya Zvezda with the title 'Ashamed of Our Labor' was discussed eagerly in the shops, sections and brigades, and then at a joint meeting of the party buro, the trade union committee, representatives of the administration and active party and trade union members.

"The unanimous opinion is this: The content of the letter is essentially correct. Yes, the motor vehicle repair plant headed by Colonel A. Bokarev has not been able to

supply us for a long time with repaired chassis in quantities necessary for fulfillment of the production plan. But it would be unjust to blame the motor vehicle repairmen alone.

"The fact is that first of all the truck cranes, and especially the chassis, that come to us from the troops are in such a sorry state that the existing specifications and norms prohibit the motor vehicle repair plant from accepting most of them. The frames and cabs of a fifth of the motor vehicles are deformed or damaged, and 70-80 percent of them have parts missing.

"We plead and demand that these vehicles be outfitted as they should be, and that stricter requirements be imposed on preparing the equipment for repair. We maintain extensive and almost fruitless correspondence with unit commands and with central and local engineering troop directorates. Sometimes they send us some of the lacking parts, but usually they send us certificates stating that the loss would be covered by those responsible. However, the money goes into the state budget, and if we are able to raise anything through the certificates, the efforts have to be funded by the plant's assets. All of this increases the overhead, which in the final analysis takes money out of the entire collective's pocket.

"Sometimes rather than sending us motor vehicles with the required parts intact, they ask us to repair only the crane unit, and to leave the chassis in its previous condition. On some occasions we have acceded to these requests for the sake of fulfilling the plan. One such case was precisely the topic in the letter from our workers published in *Krasnaya Zvezda*.

"Planning mistakes are what force us to resort to such actions. Each year the Main Motor Vehicle Directorate issues a certain order for the repair of truck-mounted cranes, which is then included in the plan approved by the chief of engineering troops. But the cooperating motor vehicle repair plant subordinated to the district sometimes changes the volume and schedule of the deliveries on its own, predestining our collective to failure of the plan. Thus this year it decreased its deliveries by 45 units.

"How can the present abnormal situation be corrected? Discussion of the letter at the enterprise produced the following proposals.

"Considering that the conditions under which truck cranes work differ in many ways from those in which conventional trucks of the same type work, we need to change the specifications pertaining to submission of truck crane chassis for repair. This issue could be resolved by the Main Motor Vehicle Directorate jointly with the corresponding directorate of engineering troops.

"The quality of truck crane repair could be improved, repair time could be decreased, and the rhythmicity of the work could be raised by creating an exchange fund of

motor vehicles and returning repaired vehicles to the units irrespective of their original ownership. The plant management submitted this proposal to the engineering directorate. As well as a request to place stricter demands on the completeness of vehicles coming in from the troops for repairs.

"On their part the command and the party, trade union and Komsomol organizations of the enterprise have implemented a number of measures to raise work effectiveness and quality."

"We understand the complaints, but we are not at fault," believes Colonel A. Bokarev, chief of the motor vehicle repair plant.

"Truck cranes that fall into disrepair are sent from the troops to the same enterprise that employs the workers who reproach us for breaking contracts. There, they remove the K-162 cranes and forward the KrAZ-257 chassis to us, so that after they are repaired they could reinstall the cranes they had repaired through their own resources.

"If all vehicles that reach our plant would satisfy the requirements, we motor vehicle repairmen would not have any problems. But most of them arrive lacking far more parts than permitted by any of the norms. We simply have no way to replenish this loss—we do not possess the corresponding spare parts fund for this.

"Understanding the difficult position the enterprise associated with us is experiencing in fulfilling its plan, through our joint effort we repair some of the incomplete vehicles, even at a loss. You must agree that the problem cannot be solved completely in this way. As long as the existing rules for submitting equipment for repairs are grossly violated, the situation will not change.

"Thus the complaints addressed to us motor vehicle repairmen by those workers are understandable, but it is difficult for us to react to them appropriately."

"Steps have been taken to fulfill contracted obligations," reported Major General N. Zaporozhtsev from the Main Motor Vehicle Directorate.

"The article in *Krasnaya Zvezda* titled 'Ashamed of Our Labor' was examined, and the circumstances that made it possible for an inoperable truck crane to be released from the repair plant were carefully studied.

"The Main Motor Vehicle Directorate has taken steps to ensure strict fulfillment of contracted obligations by the motor vehicle repair plant, within the volume foreseen by the 1987 plan. It was emphasized especially to Colonel A. Bokarev, the plant chief, that reducing deliveries of repaired vehicles was impermissible.

"Considering that KrAZ-257 motor vehicle chassis serving as crane beds work in harsher conditions than do trucks of the same type, causing accelerated wear and breakdown of certain machine units and parts, a decision was made to reexamine the requirements of the specifications on acceptance of KrAZ-257 truck crane chassis for overhaul and the replacement factor for spare parts for them this year."

"A directive to improve the work has been sent," Lieutenant General V. Kuznetsov of the Directorate of the Chief of Engineering Troops assured the editor's office.

"The letter titled 'Ashamed of Our Labor' published in Krasnaya Zvezda on 23 June concerning unsatisfactory repair of KrAZ-257 chassis for K-162 truck cranes was carefully examined."

The reply goes on to describe how it happened that a repaired crane and a junk chassis that was essentially impossible to use were sent to the troops. But not a word was said about the fact that this was the grossest violation of the established requirements on the quality of equipment released from repairs.

The reply also lists the measures implemented by the subordinated repair enterprise in response to the discussion of the letter from the workers. And then the following is communicated:

"A meeting of the party buro was held in the directorate, during which measures to improve repair quality were planned. Moreover a directive requiring improvements in the work and higher quality of equipment repair was sent to centrally subordinated units."

And so, the article "Ashamed of Our Labor" elicited responses from all upon whom resolution of the issue raised in it depends. Specific measures were proposed, and their implementation would make it possible to raise the effectiveness and quality of equipment repair, and the rhythmicity of the work of the enterprise's collective. Now it is time to move from words to action, from mutual reproaches to business-like interaction. Are all participants of the discussion ready for this?

Unfortunately there is no certainty in this. And primarily because the response signed by Lieutenant General V. Kuznetsov said nothing about the proposals and requests that had been submitted to the directorate of engineering troops by the command and the collective of the enterprise. The editor's office hopes that these proposals will be examined concretely and in a concerned and business-like way. Limiting the effort to publishing a directive requiring work improvement is not enough in this case.

Repair Problems Remedied in Air Defense Forces
18010008a Moscow KRASNAYA ZVEZDA in Russian
26 Sep 87 p 2

[Article: "Zone of Responsibility"]

[Text] "The article 'Zone of Responsibility' published in Krasnaya Zvezda on 1 and 4 August of this year was examined by the main headquarters, the political directorate and the directorates and services of the air defense troops. The problems raised in the letter were discussed by the party organizations of the arms and services, by the main armament directorate and by the overhaul and repair directorate.

"The criticism was recognized to be justified. Raising the issues of organizing material and equipment supply and the repair of armament and the responsibility of officials for quality maintenance of armament was a timely and proper thing to do.

"Fulfilling the requirements of the CPSU Central Committee and the USSR minister of defense, the military council of the air defense troops is implementing organizational measures with the purpose of improving the administrative structure and restructuring the work style and methods of the central administration.

"The attention of Colonel General L. Leonov—the chief of the main armament directorate, and Colonel N. Goncharov, the secretary of the party committee of this directorate, was turned to the need for increasing the responsibility of personnel for special and technical troop support.

"Major General of Aviation V. Sibirtsev, chief engineer of the air defense troops and deputy commander in chief for operations, was harshly criticized for serious problems in efforts to ensure quality operation of equipment in the troops.

"Major General V. Voskoboinikov, chief of the directorate for overhauls and repairs, was given the task of implementing exhaustive measures to upgrade the quality and ensure the timeliness of repairs on equipment and armament.

"The efforts of executives to upgrade the quality of equipment and armament maintenance and operation will be analyzed in the course of the final inspection of the 1987 training year. The working, moral and political qualities of the officers of the armament services of the units and formations are being studied. Additional measures to ensure personal responsibility of engineers and technicians and of all personnel for maintaining equipment and armament ready for immediate combat use are being developed locally."

Lt Gen V. Silakov, military council member, chief, political directorate of the air defense troops

Colonel V. Toporov also replied to the article "Zone of Responsibility." He reports that steps have been taken to reduce the time it takes to restore air defense resources and to upgrade the quality of their overhaul. Control over the provision of spare parts, tools and accessories to air defense troops has been intensified. Troop unit chief engineer Lieutenant Colonel A. Filippov and deputy commander Lieutenant Colonel V. Kulakov were disciplined for irregularities in their work.

A response to the article signed by Colonel A. Atroshchenko, deputy chief of the political directorate of the Moscow Antiaircraft District, states that acting chief of the armament directorate Colonel A. Glukhov and chiefs of the motor vehicle and engineering services lieutenant colonels M. Bulgakov and Yu. Gushchin were reprimanded for weakening their control over the activities of subordinated services and for sluggishness in restructuring their personal work. Division chief Colonel V. Bolshakov was compelled to report the errors of his ways to the political division of the headquarters and the district's directorates. Communists V. Kolokolov, V. Yemelyanov, A. Bobryshev and O. Pavlov were harshly criticized at a party meeting of the armament directorate for sluggishness in providing the units with spare parts, tools, and accessories.

Unwed Mother Seeks Understanding From Army
18010008a Moscow KRASNAYA ZVEZDA in Russian
1 Aug 87 p 3

[Article by Svetlana Sh., Smolensk, to the editor: "I Long So Much for Understanding"]

[Text] Dear editor! I was forced to take pen in hand by unusual circumstances. The problem is that I am expecting a child, and the father of my child, a soldier, was unable to obtain leave from his military unit so that we could register our marriage. And obviously it is impossible for me to travel to his location. Are the commanders really unable to understand my position? At first I could not understand why things were the way they were, I blamed Andrey for everything, and we quarreled.

I'm running ahead of myself. Let me start at the beginning. I went to school together with Andrey S. (we decided not to use his name or that of the letter's author.—Editor). Then we went to work. We did not plan to get married for the time being because Andrey was certain to be drafted into the army after school. And that is what happened. At that time I did not know that we were going to have a child. When I came to realize that, I wrote Andrey. He told his father about everything. And he wrote me that his parents would be understanding in all things. Except that everything turned out totally differently. I was told that Andrey's father did everything he could to talk his son out of marriage. He did so because supposedly things would not turn out, and that marriage would mean the ruin of all of the plans Andrey had made for his life. But I do not believe this. A father is not the only one who can prod his son toward

unseemly actions. My mother, for example, could do nothing but scold me when she found out, she could not understand. Is it really impossible for people to understand that we love each other, and that I would never agree to part with our child for anything in the world?

But parents are parents. And therefore, being obedient to them, Andrey and I decided to postpone registering our relationship.

But then things began going poorly in Andrey's army career: Expressions of gratitude and certificates praising a job well done alternated with successions of extra details. I tried to console him as best as I could. In the end we decided to register our marriage, but his commanders would not grant him leave. I lost patience at this moment, I "flipped out." Just imagine for a minute what things were like for me at work and at home! And when he wrote me that he might not come until after the birth of the child, feeling that "they would have to grant me leave then," I lost all patience. He telephoned me, and I said so many terrible things to him that even now I can't remember what I said. In a letter that followed soon after, he said "I don't think I'll be writing you any more."

Of course, I insulted him terribly with my mistrust. Writing a letter to the newspaper is the last thing I would have ever wanted to do, but I wish to show to everyone and to myself that love is stronger than anything on earth. Recently I received a note from Andrey. He made it understood that he loved and remembered me. But there was no return address.

What can I say, neither of us are angels. But we could have a chance at happiness if only people did not put obstacles up in the way of our happiness. And Andrey would then be able to work normally.

Things are very difficult for me right now. I long so much for understanding.

From the editor: The circumstances behind this anxious and confused letter are unusual, but unfortunately they cannot be called unique. Nor can the author's position. Young people typically seek the causes of their woes outside of themselves, they typically blame others for them rather than themselves. This is valid in relation to Andrey. His letters to Svetlana are totally unsympathetic.

As far as the position of commanders is concerned, in all cases they should do what benefits the state. If a young family could be saved, they must do what they can to save it. When a soldier is happy and calm of spirit, army service can only benefit.

Personal Use of Airplane Condemned

18010008a Moscow KRASNAYA ZVEZDA in Russian
8 Aug 87 p 2

[Article: "An Airplane Trip for Personal Reasons"]

[Text] Such was the title of a letter and related comments published in Krasnaya Zvezda on 7 June discussing poor control over the organization of transportation in the air forces of the Pacific Fleet.

Lieutenant General of Aviation Yu. Gudkov, commander of the Pacific Fleet's air forces, communicated to the editor's office that the criticism was found to be valid.

The personal affairs of communists Major General of Aviation I. Ivkin and Major General of Aviation N. Rogov were examined at a meeting of the party committee. The party committee rebuked Communist N. Rogov for violating the rules of shipping personal articles, and harshly criticized Communist I. Ivkin for poor control over the organization of transportation.

To compensate for damages Major General of Aviation E. Katayev, who used an airplane for personal reasons, was fined 1,412 rubles, Major General of Aviation N. Rogov was fined 500 rubles, and Major General of Aviation I. Ivkin was fined 1 month's wages. The cost of using a Volga passenger car was also recovered (1,500 rubles). Colonel V. Yermolkin, chairman of the peoples control commission of the fleet's air forces, was ordered to appear before the military council of the Pacific Fleet air forces. He was harshly criticized for the ineffective work of peoples control organs of the Pacific Fleet's air forces. The organization of air transportation was brought into correspondence with the requirements of the guidelines.

As we can see, the Pacific Fleet's air forces reacted responsibly to the critical remarks published in Krasnaya Zvezda. However, the editor's office has not received a report on what measures of party influence were adopted against Communist E. Katayev, on whose orders an airplane trip intended for shipment of technical property was transformed into an airplane trip for personal reasons. The major general of aviation used that airplane to fly from the Pacific Fleet to his new place of service in Leningrad.

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Self-Propelled Antitank System

18010196e Moscow VOYENNYYE ZNANIYA in Russian No 4, Apr 87, p 30, back cover

[Article by Col (Res) V. Knyazkov]

[Text] I do not think it is necessary to explain to the reader how menacing and dangerous the modern tank is in combat. It must be fought quickly and decisively. Any delay is equivalent to death. But it is far from simple to destroy those powerful armored vehicles, even if they are subjected to the fire of antitank guns and grenade throwers and if antitank mines and hand grenades are employed.

The scientific-technical revolution supplemented the arsenal of antitank resources with the PTUR—the antitank guided missile. PTUR complexes may be portable and transportable, and they may be carried by helicopters and airplanes.

Let us look at the figure. The reader can clearly see the guides of the rocket launcher, which is loaded with three antitank guided rockets; three more are stored inside the vehicle. Thus the total ammunition store of the complex is six antitank guided rockets.

The BRDM armored reconnaissance vehicle, modified in a special way of course, is used as the base for the launcher. It is highly maneuverable, and it can even travel cross-country. It can attain a speed of 40-50 km/hr on dirt roads and 80 km/hr on the highway. The vehicle can travel 500 km on one fueling.

The capability for independently surmounting water obstacles is an important merit of the launcher. The water jet propulsion unit generates a water speed of 8-9 km/hr. Range on water, measured by time of travel, is 12 hours.

The self-propelled complex weighs 5,850 kg, and its overall dimensions in combat configuration are length 5,700 mm, width 2,750 mm and height 2,650 mm.

The vehicle itself consists of three compartments—propulsion, control and fighting. The propulsion compartment is in the front of the body, and the control compartment is in its central section. This is where the controls and the crew of the self-propelled complex—the gunner-operator (he is also the vehicle commander) and the driver—are located. The commander doubtlessly bears special responsibility. His preparations must be faultless, since he has in his control an entire antitank rocket complex—moreover one that is self-propelled, highly maneuverable and possesses high firepower: All antitank guided rockets may be launched in aimed fire within 30 sec. When combat requires, the crew can also use a manual antitank grenade thrower secured in a special container.

The fighting compartment occupies the entire central and rear sections of the body. There is a steel partition between it and the control compartment. The top of the fighting compartment is covered with a lid which opens automatically simultaneously as the guide group is raised.

When military specialists evaluate the quality of combat equipment they always consider the readiness of the given system to open fire. If for example the launcher were traveling and a command to immediately destroy a suddenly appearing armored target were transmitted at this time, the gunner-operator would be ready to press the launch button within practically just 40 sec—such is the standard for switching the vehicle from travel to combat configuration. And the time allotted to preparing for travel is the same, not more. In a word, the self-propelled complex can quickly change its fire position, evade an enemy strike with a single leap, take part in a hastily devised antitank screen and so on.

The antitank guided rocket is the main component of the self-propelled complex, and it is an effective fire weapon against moving and nonmoving armored targets. The antitank guided rocket is small in size—its length is 1,150 mm, its caliber is 136 mm, and the span of the fin assembly is 750 mm. The weight of a fully armed rocket is a little more than 20 kg. It is dependable, and it is easy enough to handle and operate.

Special mention should be made of the PTUR's shaped charge. It utilizes a physical phenomenon called the cumulative effect (the name comes from the Latin word "cumulare," meaning to amass or accumulate).

The cylindrical explosive charge has a conical pit at its front—a crater faced with a thin metal lining. The igniter is at the opposite end. It is activated after the rocket strikes an obstacle, detonating the charge. The detonation wave begins to move forward. In response to pressure from the explosion products the crater lining begins to disintegrate starting at its apex, and in thousandths of a second it transforms into a thin metallic stream that moves along the axis of the charge at a velocity of 12-16 km/sec and pierces steel armor.

Armor-piercing capability is the most important characteristic of any antitank ammunition. But while in the case of an artillery armor-piercing shell its weight and velocity play the decisive role, these factors have no significance to the PTUR. Its task is to deliver the shaped charge to the target with high accuracy.

The antitank rocket has, in the words of specialists, a normal aerodynamic design (it is often referred to as a "tailless" rocket), and it consists of a warhead and the instrument and fin assembly sections. The warhead, which contains the shaped charge, is covered in front by a cowling. This reduces the energy required to overcome the resistance of the oncoming flow of air.

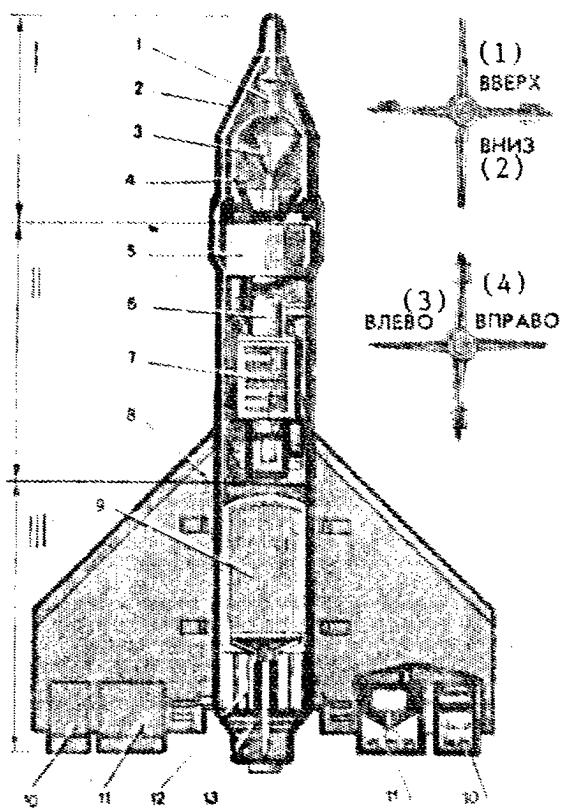


Figure. Antitank Guided Rocket

I—warhead; II—instrument section; III—fin assembly section. 1—fuse; 2—cowling; 3—shaped charge crater; 4—warhead; 5—power source (onboard electric battery); 6—wire communication spool; 7—control unit; 8—fin; 9—sustainer engine; 10—roll electromagnetic; 11—control (heading and pitch) electromagnet; 12—booster engine; 13—diaphragm

Key:

1. Up
2. Down
3. Left
4. Right

The shaped charge is detonated by a fuse equipped with a so-called remote arming mechanism (the fuse is not fully armed until several seconds after the rocket is launched, after the rocket is 70-200 m from the launcher); it is classified as a direct action fuse. As soon as the rocket strikes an obstacle its ballistic tip is crushed, and the crater of the shaped charge presses against the armor surface, causing instantaneous explosion of the charge.

The instrument section contains the onboard system, which includes a control unit, a power source, two spools of wire, four control electromagnets and two roll electromagnets. In turn the control unit contains a receiver and a gyroscope unit.

The rocket is controlled on its flight path by wires

connecting it to the operator-gunner's console. Thus it is no accident that there are two spools inside the antitank guided rocket. These are light, practically inertia-free bobbins, each of which holds 2 km of bimetallic insulated wire with a diameter of 0.16 mm. These strong "spider web threads" are what form the two-wire communication line connecting the rocket's receiver with the contacts of the launcher.

The purpose of the receiver is to convert and amplify command signals transmitted by the communication line, and to transmit them to the control electromagnets. The gyroscopic unit stabilizes the rocket's angle of roll on its flight path. As soon as the PTUR begins to deviate to the side, the gyroscopic unit immediately "feels" this and determines the direction and magnitude of the roll. The generated signals are transmitted to actuating organs, and the rocket returns to its previous position.

The control and roll electromagnets are the drives of the actuating organs—airflow interrupters called interceptors. These thin arched plates oscillate at a frequency of 10 Hz. Assume that the gunner-operator transmits a command "Up" or "Down" by wire to the rocket. As a result the interceptors would linger longer in one extreme position while in the other their "hesitation" is shorter. This changes the nature of streamlining of the fin by the oncoming airflow, and consequently controlling forces arise, forcing the rocket to maneuver in the vertical plane. Control of the rocket's heading is similar.

The fin assembly section consists of a housing bearing four fins, the control and roll electromagnets and two tracers. The fins are trapezoidal planes with an sweep-back of 45°. The tracers are located at the tips of the horizontal fins. The intensity of their red flame makes it possible to observe the PTUR visually along its entire flight path and to guide it to the target.

The housing of the fin assembly section contains the propulsion unit, which consists of two parts—a booster and a sustainer rocket engine. These are essentially the first and second stages of the rocket, and they operate in series; however, they are not jettisoned in flight, since there is no need for this to happen: Only their fuel reserves—the charges—burn away (the booster charge consists of six trilobed grains; the sustainer charge consists of an unperforated grain with its surface covered by special coatings, except for one end). The booster stage must accelerate the PTUR to its prescribed velocity in the shortest time possible. Then the sustainer stage keeps the rocket flying toward the target at constant velocity.

The PTUR is controlled by the gunner-operator by means of a console and a perisopic 8X binocular sight. The console is also used for prelaunch testing and launching of the rocket. Observing its flight through the sight, the gunner-operator transmits "up-down" and "left-right" commands to the PTUR by manipulating the control stick on the console. The control stick may be deflected a maximum of 40° in any direction.

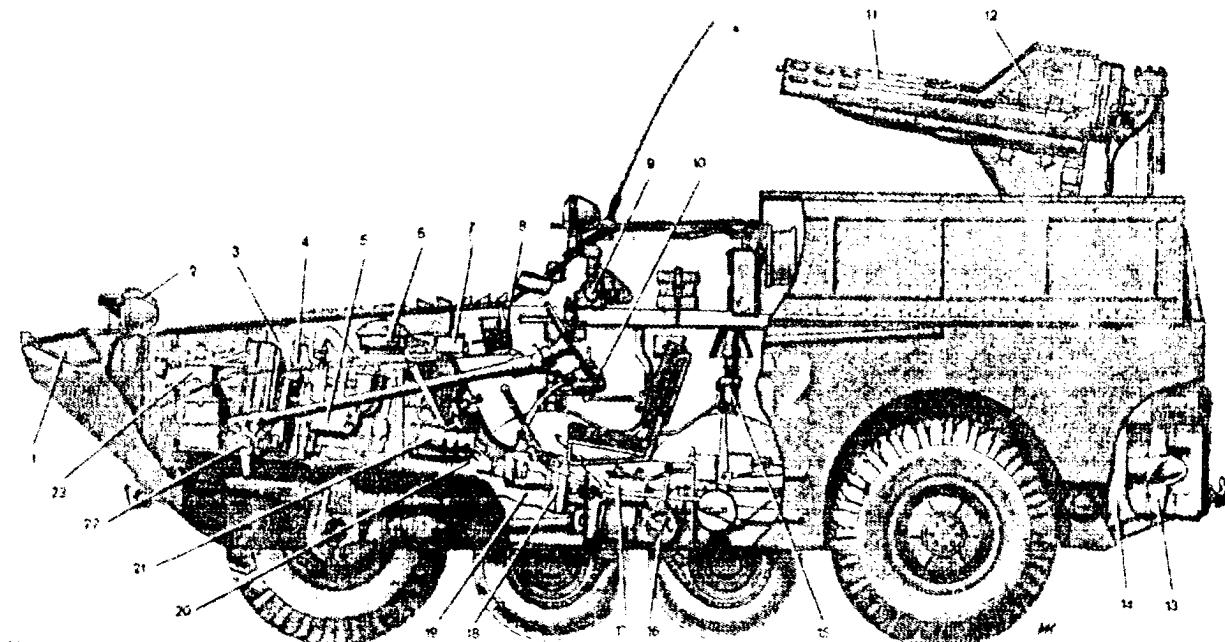


Figure. Launcher

1—wave deflector; 2—headlight with light filter; 3—cooling system's radiator; 4—oil radiator; 5—generator; 6—air filter; 7—main brake cylinder; 8—instrument panel; 9—sight; 10—PTUR control console; 11—PTUR guide; 12—rocket; 13—water jet impeller; 14—water jet tube; 15—hydraulic auxiliary wheel hoist; 16—auxiliary wheel power takeoff point; 17—transmission box; 18—transmission brake; 19—gearbox; 20—clutch; 21—starter; 22—steering mechanism; 23—tire inflation system compressor

The rocket is aimed on the target by what is known as the three-point method. The first point is the gunner-operator's eye (the cross-hair of the sight), the second is the rocket on its flight path (the flame produced by the tracers), and the third is the target. The task is to guide the PTUR to the line of sight, which the operator constructs mentally from his eye to the target, and to keep it on this line until it strikes the target. It all seems very simple. But if an inexperienced person is sitting behind the console, in a few seconds he would either cause the rocket to climb steeply into the sky, or drive it

into the ground. This is why the routine training of gunner-operators involves regular practice in which they hone their powers of visual estimation, their hands develop firm control, and they acquire the ability to deduce the enemy's maneuvers quickly and to strike him accurately with the "arrow of fire."

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11004

P-42 Records Discussed

*18010006b Moscow KRASNAYA ZVEZDA in Russian
9 Sep 87 p 4*

[Article by Engineer G. Grishayeva: "The P-42's New Records"]

[Text] At the beginning of the year KRASNAYA ZVEZDA reported world records set by test pilot V. Pugachev in a stock P-42 airplane.

"This airplane," Pugachev said at that time, "has not yet revealed all of its capabilities, and it may exhibit even higher results in the future."

This was confirmed by a telegram sent from Paris to the USSR Aviation Sports Federation.

To be more precise, it was intended for the collective of the Experimental Design Office imeni P. O. Sukhoy. Here is what it said:

"...It is our pleasure to inform you that the records below were certified and recorded in the list of official records of the International Aeronautical Federation.

"World records:

"Class C

"Subclass C-1 (ground-based airplanes)

"C-1-h (airplanes weighing from 12,000 to 16,000 kg)

"Group III (turbojet airplanes)

"Time to attain an altitude of 9,000 m—44,176 sec (F-15—48,863 sec)

"12,000 m—55,542 sec (F-15—59,383 sec)

"Class N (STOL aircraft)

"Time to attain an altitude of 3,000 m—25,428 sec

"12,000 m—57,367 sec

"15,000 m—75,667 sec

"Pilot—Nikolay Sadovnikov (USSR)

"P-42

"Sincerely yours, Yan Vatlou, technical advisor."

There is no need to explain what all these letters and numbers mean. They are clear to all, and they signify that another seven time-of-climb records were entered into the table of world accomplishments.

The history of Soviet aviation contains many examples of series-produced aircraft that possessed flying qualities of a higher level which were not discovered until later on. It would be sufficient to recall the famous quiet-running U-2 trainer. Piloted by V. Chkalov with a passenger aboard, it flew at a considerable angle and with jeweler's precision through a space between two pines significantly narrower than its wingspan. Design ingenuity and the pilot's expert hands did what seemed impossible. Today the stock P-42 high-speed aircraft is challenging the records.

"In the course of breaking the record for time of climb to an altitude of 12,000 m in class C-1," said the project technical supervisor, "we also incidentally improved the result for 9,000 m. Consequently we are continuing to reveal new capabilities in our aircraft. Two time-of-climb records were set in class N for altitudes of 12,000 and 15,000 m. A record was set for the first time in this class. It was conceivable in theory that a class N airplane could function under these conditions. But what about practically? After all, the airplane must not use up more than 500 meters in its take-off run. This was another problem that had to be solved by specialists operating the measuring system. It must be said that they completed their task with honor. Here is the trick they used: They painted black-and-white stripes around the P-42's wheel. This made it easier to document the moment at which the aircraft broke away to a hover on a video recording of the flight."

From the control tower the P-42 resembled a graceful silvery bird as it taxied to the runway and rolled to a halt. It did not have to wait long for the command: "Forty-two, take off!" A swift take-off run, and in an instant it appeared as if some invisible force raised the craft aloft.

"Modern high-speed airplanes had not participated in class N before," said Test Pilot 1st Class Nikolay Sadovnikov. "They are incapable of taking off and landing on such a short strip. We were the pioneers. What is typical of these flights, you ask? First of all the timing of take-off and landing must be precise. Time is reckoned in the fractions of a second, and the brain works like a computer. On attaining altitudes of 12,000 and 15,000 meters, when instrument speed decreases to a minimum, you must be on guard to make sure that the angle of attack designed into the aircraft would not be exceeded so as to cause a stall. You have complete trust in the instruments, but you work intuitively with your eyes, which track the position of the horizon. There are also unique things about landing the aircraft. The wheels must touch down at a specific landing speed, at the point where the measuring apparatus will most likely register the landing."

Nikolay Sadovnikov talked about those who helped him prepare the flight plan and the aircraft, and about those who have set new records.

"I studied under Vladimir Sergeyevich Ilyushin, a famous test pilot who was also a record holder in the past," the pilot continued. "I studied under the engineers of our experimental design office, and I came to realize that there was only one satisfactory answer whenever they impatiently asked me how things went after I landed: 'Everything went well.' As for everything else, it was up to the aircraft to prove itself."

"In the fight for world achievements in time of climb," said the general designer, "only airplanes with a powerful propulsion unit, with low take-off weight and with improved aerodynamic shape can make the challenge. Record results were demonstrated in 1958 aboard the F-104. These records lasted for 4 years, after which they were broken by the F-4 Phantom fighter. These records went unchallenged for 13 years. In 1975 the Americans once again proved themselves aboard the F-15 Eagle. But last year and this year we took the lead. What made success possible? Close cooperation between the designers of the airplane and of the unique engines, which are distinguished by high power and the highest technological level."

11004

P-42 Attains New Altitude Record

*18010006a Moscow KRASNAYA ZVEZDA in Russian
24 Sep 87 p 1*

[Article by Engineer G. Grishayeva: "Leap into the Stratosphere"]

[Text] The airplane was on the mark. The readiness of all equipment of the measuring system was checked and the coordination commands were rehearsed again and again. Then came the messages: from the radar station—"Automatic tracking is on"; from the controlstation—"I see him." And in all of this, they all shared a single thought: "The main thing is to start recording on time."

The pilot spoke: "I have ignition." That was the moment from which this record-breaking flight was recorded.

The swift take-off run, the take-off, the climb, documentation of the maneuver, and the return to the airfield. After this, meticulous analysis of all recorded data.

Not long after that, documents for the signature of sports commissar A. Ilin and aviation sports international category judge V. Pavlov were sent to the International Aeronautical Federation [IAF].

The altitude figures were contained in the documents: Altitude was maintained within 19,335-19,429 m for over 90 seconds of horizontal flight. Never before had an airplane of this class—an STOL aircraft—climbed to this altitude.

In a telegram from Paris to the USSR aviation sports federation, the IAF confirmed a record altitude of 19,335 m in a P-42 airplane in class N. Test Pilot 1st Class N. Sadovnikov had become a repeat world record-holder.

Readers interested in the development of aviation are of course aware that he had previously broken seven time-of-climb records in a stock P-42. Two of them were first for this class—flights to altitudes of 12,000 and 15,000 meters. This implies that this craft satisfies high requirements.

Record-setting flights are carried out under highly controlled conditions. The pilot must possess truly phenomenal endurance and self-control in order to make a go of it under such rigidly prescribed conditions. And he did it!

In Sadovnikov's opinion a test pilot's profession requires full mobilization of all physical and spiritual strengths, concentration and precise calculation. As far as record-breaking flights are concerned, we would have to add the sportsman's will to win. And even so, it takes a community of effort to subjugate speeds, altitudes and distances. The test pilot is a material embodiment of all of the qualities imparted to the aircraft by its creators—designers, production engineers, laborers.

"This record and the ones before it," Sadovnikov summarized, "are chiefly a victory of our experimental design office, and of design ingenuity. Add to that the selfless work of all of the numerous services that prepared the aircraft for flying. What plans do we have for the future, you ask? As in any other area of creative activity, we in aviation cannot be fully satisfied with our accomplishments: We are involved in a continuous process of improvement. We will push on, we will keep on working."

11004

Lt Gen Rusanov Faults Pilot Initiative, Training Priorities

*18010006c Moscow KRASNAYA ZVEZDA in Russian
25 Sep 87 p 2*

[Article by Lt Gen Avn Ye. Rusanov, air force commander, Red Banner Central Asian Military District, USSR distinguished military pilot: "What Is Inhibiting Initiative?"]

[Text] The situation in the exercise changed quickly, just like in real combat. Just a few minutes earlier there was nothing that could raise doubt in the success of the attack by the motorized riflemen. But as soon as the "enemy" committed his tank reserve to combat, the scale clearly began tilting in his direction.

The fighter bomber squadron commanded by Lieutenant Colonel V. Doroshenko, military pilot 1st class, was given the mission of hitting the armored targets. A short time later the first pair of supersonic airplanes struck the "enemy" with missiles from out of the hills.

It appeared as if everything was going well. Each time fighter-bombers appeared in the sky over the training ground the number of surviving targets decreased. However, it was known to me that the opposing side was deploying a missile battery not far from the "front line." I was hopeful that one of the air warriors would recognize the danger it represented, and take the initiative to destroy it. But this never happened. The fighter-bombers continued to attack only the predetermined targets. Therefore despite the fact that their missiles and bombs inflicted considerable losses on the "enemy," the score awarded to the squadron's actions had to be lowered. This astounded the aviators: They had completed their mission successfully, and they had destroyed all of the ground targets. What did a missile battery that had not even been plotted on the flight maps have to do with anything here?

In a word, the fighter-bomber pilots could not be objective in grading their own performance. Nor was there any substantial discussion of the error in the squadron during the flight critique. The aviators were too angry at the strictness of the inspectors to make a self-critical analysis of their actions in aerial combat. Some time ago the fighter-bombers had taken part in a missile and bomb strike on an "enemy" airfield. All of the preparations were made in the same way that they had been made every time before. The targets to be destroyed and the approaches to them were studied beforehand, the maneuvers to be taken to surmount "enemy" air defenses were planned, and all of the details of the combat were discussed and worked out on the ground. The plan approved by the command promised certain success.

And yet, some mistakes could not be avoided. Thus the first pair of fighter-bombers was unable to make a direct hit on the "enemy's" radar station and thus blind it. A second missile volley suppressed only part of the air defenses of the target. The rest of the crews were still in danger of suffering retaliation.

Aircrues reaching the scene subsequently, which were aware of the mistake made by the first crews from the radio traffic, could have corrected it. But they did not. Why not? For just one reason, I think. The exercise scenario had not foreseen this variant in the actions of the aviators, and so each pair attacked its own targets—parked airplanes. The pilots failed to display any initiative.

In another case the "enemy" attempted to launch his fighters from an alternate airstrip. Fighter-bombers maneuvering to attack ground targets should have immediately reacted to this, and tried to annihilate the taxiing

aircraft, and to put the alternate airstrip itself out of commission. But no one in the sky above the training ground did this; everyone stayed with their "own" previously designated targets.

During that exercise many situations developed that required the aviators to take resourceful, unplanned action. But the pilots did not seek out targets on their own, without hints from the ground, without orders redirecting them to new targets. Consequently there are grounds for saying that lack of initiative, displayed once in combat and left unaddressed, transformed subsequently into a habit.

It must be said that aviators of this regiment are not the only ones who are guilty of lacking initiative in combat. Such shortcomings have also been encountered in subunits in other units of the district's air forces. In my opinion this state of affairs came into being chiefly because some commanders feel that theoretical knowledge and occupational habits are the most important things in the training of an air warrior. They feel that these things alone (in this case occupational habits are perceived too narrowly) can make a pilot competent, and that when they are combined with courage they would ensure victory over the enemy. It is on the basis of these premises that they organize the training process.

The reader might object that it is inappropriate to expect initiative from recent graduates of pilot or navigator schools. After all, they do not know tactics deeply enough yet, and their habits of operating the aircraft equipment are weak. But I am certain that the initiative of a military pilot and a navigator in combat is a quality typical of a Soviet commander, of an officer in general. Could a person who is unwillful and who exhibits not an ounce of creativity on the ground transform suddenly in the air into a bold warrior, into a master in the use of the latest tactics, and stun his rival with brilliant improvisations on the theme of aerial combat? I for one have never encountered such people during my long years of service in aviation. Therefore I feel that if we wish to nurture a resourceful, bold, competent air warrior, we would have to first instill initiative in the individual on the ground.

Time and time again I have witnessed how the energy of young officers is wasted when left unsupported by elders. This happens usually because it is hard for a commander of any rank, be he the commander of a flight or a squadron, to agree to introduce even undebatably useful innovations into the airman training process, or to give a subordinate the "go*ahead" on a promising innovation. This happens because the infamous fear of something going wrong hangs over them like a Damoclean sword. Nor do senior chiefs always welcome those who stick their necks out. They feel it would be better to restrain the experimenters, supposedly in the interests of flight safety.

But could it be that such overinsurance or the fear of displeasing higher-ups is forcing us to curtail reasonable initiative that could significantly increase the combat readiness of the units and subunits? Once again I know from my own experience that prohibitions can produce only one result: Thoughtful pilots who are compelled to seek innovations in tactics will test their ideas out in the air on their own—that is, they will opt for what we refer to as aerial hooliganism, which can lead to grave consequences. Usually, however, suppressed initiative generates apathy in people, an acceptance of simplifications in combat training. We need not look far for examples.

Once the fighter bomber regiment in which officers A. Starysh and V. Zakharin serve as military pilots was making ready to practice take-offs and landings on a dirt landing strip.

According to the usual practice, the regiment's best-trained pilots flew first in this exercise. Observing their take-offs and landings, the other pilots in the regiment were persuaded that their fighter-bombers could perform from temporary airfields with no paved runways.

But after these trial flights, if we can call them that, things did not materialize. All because some chiefs stated the apprehension that small stones might be picked up by the air intakes of the engines and damage the blades of the turbocompressors, or that a young pilot might damage the front landing gear strut with a rough landing.

Returning in my thoughts to those days, I reached the conclusion that we had been too quick to say no at that time. We could have at least allowed military pilots 1st class and aviators trained up to that level to fly from the dirt landing strip. But there was one other important facet to this incident: We had not given any thought to how the aviators in the regiment would react having the wings of their initiative clipped. After that, would they have any more interest in fighting to introduce new tactics and piloting techniques or the best flight training procedures into the combat training of the aviators? Or would they dare to accept responsibility for a new and necessary idea or make an independent decision as a regiment commander without worrying about how superiors would react?

The changes which have been occurring in recent years in our society have also affected the army, including the air force. They have compelled us to fundamentally reexamine the attitude expressed by aviators toward combat training, and to self-critically evaluate the situation that has evolved in the air units and subunits. One must consider, after all, that the appeal of the CPSU Central Committee to the Soviet people, which states that our attitude toward our work must be improved, that crash improvement campaigns, window-dressing and report padding must be decisively eliminated and

that all must work together to ensure good labor organization, is also addressed to us, to the military. Are simplifications in flying assignments not a form of window-dressing?

The restructuring effort has affected all facets of the life and activities of our district's aviators. In my visits to the units and subunits I am pleased to note the changes that are being made in training, in exercises and in flying shifts. Take as an example the regiment in which Lieutenant Colonel I. Belozor, a military pilot 1st class, serves. The regiment does not fill up its training time with rote learning of textbook truths; instead, the lessons are saturated with various scenario inputs. The students encounter situations that they might likely experience during a flying assignment. The aviators are required to fully justify their actions, and if someone makes a mistake, they are required to correct their comrades. Squadron commanders encourage the initiative of their subordinates and their search for nonstandard solutions to combat training problems, and they heed the proposals of not only the top-class specialists but also the young pilots. And if these proposals make any sense at all, everyone learns about them.

For example young pilots are aware that in a training exercise they may be asked to perform the responsibilities of a pair leader or a flight commander, and that the latter would perform as squadron commanders. Therefore in order to uphold their reputations before their fellow servicemen, the aviators do a lot of independent study.

One of the unique things that this regiment does when preparing for combat training sorties is to assign combat training missions to each flight, to each pilot specifically, and not in general as had been done before. This compels the pilots to engage in tactical thinking, and they are provided a possibility for proposing their own variant of action—that is, for displaying initiative.

The unit command had to show some initiative in order to ensure high end results. The headquarters developed and introduced changes in the training schedule. As an example the standard training schedule foresees an identical number of hours for studying aerodynamics for both a military pilot 1st class and a lieutenant just out of school. The subunit commanders were asked to determine the number of hours required for each training discipline on the basis of the individual features and training level of their subordinates. And the time saved by the most experienced aviators was used by them for work in areas in which they were weak, and to transmit their experience to younger aviators.

I am pleased that the seedlings of initiative are breaking their way through in the district's air force units, that people are seeking ways to improve the methods of their work, and that they are not afraid of submitting reasonable proposals to higher levels, and boldly introducing innovations that have proven themselves.

Chernavin Articles on Soviet Navy Day

TASS Interviews Chernavin

*18010003a Kiev PRAVDA UKRAINY in Russian
26 Jul 87 p 2*

[Interview with Fleet Adm V. N. Chernavin, USSR navy commander-in-chief, by TASS correspondent M. Zakharchuk: "The Fatherland's Oceanic Shield"; date and place not given]

[Text] Hero of the Soviet Union, Fleet Admiral Vladimir Nikolayevich Chernavin: the son of a soldier who died in 1944 on Rybachi Peninsula. Graduated from higher naval school in 1951. Served in the Northern Fleet for 30 years. Commanded a nuclear-powered submarine. Graduated from the Naval Academy and the Military Academy of the General Staff. Held many important command and staff positions. Navy commander-in-chief since December 1985. [Question] Comrade Fleet Admiral, naval seamen are celebrating your holiday with indubitable successes in combat and political training. We will talk about that later, but for the moment please tell us what troubles you the most today as commander-in-chief.

[Answer] The restructuring effort is proceeding more slowly than I would like in all parts of our mighty fleet organism. The complex problems that we must solve and the new approach to solving them have made things difficult for some people, even though what we need everywhere right now are bold, decisive actions. We need to make radical transformations with regard for the complex nature of the present international situation, for the existing military danger, and for the new provisions of Soviet military doctrine, and we need to ensure unconditional fulfillment of the directives of the party Central Committee concerned with raising combat readiness. But some local commanders and chiefs are not yet displaying sufficient aggressiveness, they are waiting for orders from on high. Principled criticism and self-criticism, and impartial but party-strict evaluation of the state of affairs have not become the norm in all places. And without this, we cannot keep in step with the times, we cannot ensure the needed progress toward the goals of restructuring.

[Question] Please name at least one problem which in your mind requires immediate solution in light of the requirements imposed on the navy today.

[Answer] I would single out, as an example, the complex of problems associated with raising the authority of seagoing personnel. The navy consists, after all, chiefly of seagoing personnel. It cannot be said that they had not been an object of our constant attention previously, but these problems need to be solved more energetically today. This is something that is also demanded by a decree of the January CPSU Central Committee Plenum that emphasizes the fundamental importance of nurturing executives.

The need for raising the authority of seagoing personnel was a topic of discussion at a meeting of the navy's military council. We carefully studied proposals submitted from the fleets, where this problem was discussed quite openly. We can conditionally divide all proposals into three kinds—those that are within the competency of the fleets, those that may be resolved at the level of the naval command, and those that must be passed on to higher authorities. Some things have already been done. As an example recommendations that specific and effective steps be taken in the fleets to prepare and utilize reserves were submitted and are now being implemented. It stands to reason that this will require decisive restructuring of the work of many local officials. But today there is no other way, and there can be no other way, to solve the arising problems. The time for talking about the need for restructuring has passed. We need specific action.

[Question] Your concern for raising the authority of seagoing personnel is in keeping with the restructuring effort, in which decisive significance is being attached to the human factor. What does this factor represent in the fleet, and what sort of people are these, the modern naval officers, who will be chiefly responsible for implementing such major transformations?

[Answer] In their overwhelming majority these are people who are educated in the spirit of communist ideals, patriotism, and internationalism. They are good specialists with high moral, political, and psychological qualities.

I do not at all mean by this that we have absolutely no problems in the officer corps. They do exist, and in great numbers at that. For example during all the time that I served aboard ship I never met an officer who was disillusioned with his work. Today there are many such cases. But on the whole, I repeat, naval officers are capable of fulfilling any task of the motherland. And they have demonstrated this many times, albeit in the post-war years. There is good reason that over 50 naval seamen became heroes of the Soviet Union during this period.

We are especially proud of our ship commanders. They have been saddled with an enormous burden: being one-man commanders of the main fighting units of the navy, of inviolable particles of Soviet territory. And modern warships carry menacing weaponry and cruise practically all regions of the World Ocean. Hence the great responsibility of commanders for the high combat readiness of collective entrusted to them, for the training and indoctrination of personnel, and for the life and health of every member of the ship's crew. And our commanders are up to this task. One example I can name is Captain 1st Rank S. Lebedev, commander of the nuclear-powered missile cruiser "Kirov." High professional training permits him to deeply and effectively analyze all problems associated with combat training and service. I would also like to say some good things

about commanders like Captain 1st Rank V. Nikolayevskiy. The nuclear-powered strategic missile submarine under his command initiated the socialist competition in the navy. The collective is a model of resourceful, conscientious, and persistent work, and as is befitting of an initiator, it marches in the front ranks. I would also like to mention other commanders—Captain 1st Rank Ye. Zdesenko, Colonel G. Samoylov and captains 3d rank A. Vasilyev and V. Kobelev. I could go on with this list.

[Question] Comrade Fleet Admiral, you mentioned that seamen become heroes of the Soviet Union even in peacetime, that you yourself bear this lofty title. What is the reason for this, how is heroism manifested in the modern navy?

[Answer] In the specific nature of service at sea. Right now, while we are talking, seamen aboard many of our surface ships and submarines are working hard far away from their native shores, and by the fact of their presence there they are restraining the aggressive aspirations of imperialist circles and stabilizing the situation in practically all regions of the World Ocean. Believe me, this is not a simple task; it is one requiring colossal exertion of physical strength, will, coolness, and endurance of the crews. This is not to mention that the creation itself and assimilation of our modern nuclear-powered, missile-carrying, ocean-going fleet was an enormous act of heroism of both all the people and our naval seamen. Ships of a new generation outfitted with sophisticated equipment and armament are faced with tasks that had never been carried out by anyone before. And sometimes these unprecedented tasks are carried out in extreme conditions, ones requiring maximum effort.

[Question] Now tell us about the might of our navy and its equipment in greater detail.

[Answer] The modern fleet is a highly complex military organism. Essentially all armed forces contribute to it in the necessary proportions. Nuclear-powered strategic and multipurpose submarines and various types of surface ships may participate in combat activities. We also have our own air defense units—fighter aviation and antiaircraft systems. Shore- and ship-based aviation operates in all fleets. This includes missile carriers, transporters, and helicopters. Each fleet also has its own ground rocket artillery troops. And it stands to reason that we also have marine infantry armed with powerful assault landing resources, air-cushion ships, amphibious tanks, and tanks capable of "shore-to-shore" operation.

Submarines are the fleet's main striking power. They are a concentration of the most sophisticated forms of weapons and mechanisms, long-range rockets and homing torpedoes, and modern target observation and detection resources. They can cruise for unlimited distance

and time. Our nuclear-powered submarines demonstrated their fabulous possibilities 20 years ago, when they completed history's first group underwater cruise around the world.

Nonetheless there is one qualification I would like to make: Equipment, no matter how modern it may be, is not the only thing that determines the might of our fleet. This might lies chiefly in the people, in our remarkable seamen and petty officers, sea-going and shore-based warrant officers, officers, and admirals.

[Question] Please tell us, Comrade Fleet Admiral, is it possible for you to communicate with ships and submarines cruising the World Ocean right now?

[Answer] Our communication with them is always dependable.

[Question] In that case please tell naval seamen that many millions of readers of Soviet newspapers wish them success in the performance of their difficult labor. I say this with such confidence because I know that throughout all time, the fleet has been our people's favorite, and it is still so today.

[Answer] Thank you. As the commander-in-chief I can assure the Soviet people that the fleet will not let them down.

VOYENNYYE ZNANIYA Interviews Chernavin
18010003a Moscow *VOYENNYYE ZNANIYA in Russian* No 7, Jul 87 pp 1-2

[Interview with Fleet Adm V. Chernavin, USSR navy commander-in-chief, Hero of the Soviet Union, by Voyennyye Znaniya: "The Motherland's Oceanic Shield"; date and place not given]

[Text] [Question] Comrade Fleet Admiral, USSR Navy Day is a national holiday expressing the deep respect and love the Soviet people feel for military seamen and for our armed forces. And for naval seamen this is a unique kind of landmark in the origin and development of the navy. What typifies the present stage of the navy's development?

[Answer] As we know, USSR Navy Day was established on 22 June 1939 by a decree of the USSR Council of Peoples Commissars and the Central Committee of the All-Union Communist Party (of Bolsheviks), and it is celebrated each year on the last Sunday in July. In the almost five decades since that moment our navy has grown and changed beyond recognition, together with all of the country it has endured the terrible trials of the war years, it experienced qualitative renewal in the course of the scientific-technical revolution in military affairs, and it has gained access to the expanses of the World Ocean, becoming a truly oceanic nuclear missile navy. We can say with confidence that the navy is capable of averting any aggression from the sea, and that it possesses all of

the men and equipment it needs for this. But to become satisfied with present accomplishments means to ignore the future, to be out of touch with the revolutionary spirit of restructuring that distinguishes the present stage of our society's development.

The Soviet Union is a mighty sea power, bathed by three oceans and 14 seas. This spatial scope obligates us to coordinate the actions of naval forces very clearly and to exercise perfect control over them. In solving these very vast, multifaceted problems, it is important to recognize and fully utilize the available reserves. This is one of the main ways of raising combat readiness.

Combat operations in modern warfare at sea will be typified by wide use of diverse forces executing common missions, massed use of missiles from great distances, and active electronic countermeasures. This is why the requirements on combat training, the chief goal of which is to teach the personnel to successfully fulfill missions under the new conditions, are increasing.

[Question] Would it be correct to say, then, that the fleet's combat training is naturally organized with regard for the forces and capabilities of the probable adversary?

[Answer] Without a doubt. The requirement "to teach that which would be needed in war" means constantly seeking and assimilating tactics and methods of action which should not only neutralize the efforts of the opposing side but also ensure successful fulfillment of assigned missions in modern combat. In this case we need to consider the combat capabilities of all naval forces, and we need to foresee clear organization of their coordination, use of tactics that the possible adversary would not expect, and surprise use of weapons wherever and whenever he least expects it.

Science and technology are continuing to develop, and the tactics and methods of armed conflict at sea are changing. Every officer must be familiar with the level of world accomplishments in his area, so that he could predict the possible directions in the development of military affairs and promptly make corrections in the program and methods he uses to teach his subordinates.

[Question] Combat training is the most important sphere of the restructuring effort in the army and navy. What sort of problems are there here?

[Answer] We intend to create conditions in the fleets in the immediate future that would permit ships, units and formations to plan and conduct combat training more concretely and purposefully, with regard for the attained level. In this regard we intend to grant greater independence than before to our vanguard, the ship commanders. Naturally this would mean that their responsibility and the requirements imposed on them for the quality of combat training would grow as well.

I see a significant reserve for raising the effectiveness of military training: improving its organization, taking an integrated approach to solving specific combat training problems at all levels, and reducing inefficient use of time, engine life, ammunition, fuel, and lubricants. All-out justified economization is a necessary prerequisite of raising the effectiveness and culture of military labor today.

[Question] The fleet has always been proud of its personnel, of the high political, professional and moral qualities of naval seamen. Restructuring is being shaped by the hands of the people, it is a manifestation of their talent, initiative, selflessness, work, and social activity. What is being done in the navy to implement modern personnel policy determined by the 27th CPSU Congress and by our party Central Committee's January Plenum, and what are the ways to activate the human factor in strengthening the fleet's combat readiness?

[Answer] The intensity of naval service, especially ship service, grew dramatically in the last few decades, and it is continuing to grow, demanding total commitment from all personnel. And of course, no matter how sophisticated combat equipment may be, the human factor has always played, and will continue to play, the decisive role. People master highly intricate mechanisms, they operate them during lengthy ocean voyages, and they ensure the fleet's readiness to repel the intrigues of an aggressor at any minute.

The country values the selflessness of naval seamen highly. It would be sufficient to say that thousands of officers, warrant officers, petty officers, and seamen have received state decorations in peacetime, and that dozens of the best have been awarded the lofty title of Hero of the Soviet Union. Among them are officers A. Olkhovikov, L. Kuverskiy, Yu. Churilov, and V. Protopopov.

As we always emphasize, the ship commander is the central figure in the navy. It is chiefly upon him that the combat readiness of the ship and the proficiency and morale of the crew depend. It is very important for ship commanders to be appointed from among the most worthy, capable, and best-trained officers.

Fighting for the outstanding ship or unit title is said to be a matter of honor in the fleets. This title is an indication that the command and the party and Komsomol organizations were able to inspire the people to highly effective labor, and to achieve maximum manifestation of the human factor on the path of restructuring, which has become not just words but a reality to the given military collective.

[Question] No matter how difficult naval service may be, no complexities can fade its romantic image. This is why, as always, there are so many who wish to study in naval schools. Readers of the journal, most of whom are young people, would like to know how they could become naval

seamen, how they could become officers and admirals. In this connection could you tell us about your own naval service, about its beginning?

I was 14 years old in 1942 when the Black Sea submarine K-21 was awarded the Order of the Red Banner for success in combat and its commander, Captain 2d Rank N. Lunin, became a Hero of the Soviet Union. At that time it never occurred to me that I would one day also become a submariner, that I would command one of the first Soviet nuclear-powered submarines—moreover one which inherited the flag of the famous K-21. But it was at that time, as with many Soviet boys of that terrible era, that a desire to become a soldier awakened within me. My father, a naval officer, perished at sea in 1944, at Rybachiy Peninsula. On learning of the death of my father I left the tekhnikum in which I was studying in order to join the navy. In 1951 I graduated from the Higher Naval School imeni M. V. Frunze in Leningrad, and I joined the Northern Fleet as a lieutenant aboard a diesel submarine, where I was the commander of the mine and torpedo division. After 26 years of service in the North I was appointed commander of the Northern Fleet.

I do not think of my road as anything exceptional. On the contrary I was continually persuaded, and I am sure to this day, that a person who loves to serve, who strives to work honestly and conscientiously in any position, will never encounter obstacles in his career growth. Since my years as a lieutenant I have known many ship and shore-based officers who quickly grew in their positions and ranks and became admirals and generals owing to their high professional qualities. And among them were some with whom I served aboard ship.

[Question] What is especially memorable in your career, what years were especially precious? And why?

[Answer] My years as a ship commander, of course. This is the answer you would probably get from any officer or admiral. There is nothing to compare with such a time: You are totally independent, and you are responsible for the ship, for the crew, and for the specific and important task assigned to you. This position provides the best possibility for testing one's strengths and capabilities, for posing interesting and courageous goals, and for achieving them.

An atmosphere of special respect toward the ship commander, of deep trust in one another, and of unanimity is traditional in the navy. And if relationships in the crew or submarine evolve in this direction, these relationships stay with the people forever.

[Question] Would it be correct to assume that your mutual relationships with the crew of the nuclear-powered submarine you commanded have remained intact as well?

[Answer] Yes, ours was a remarkable collective, it was very cohesive. At the danger of being unobjective I would have to say that our crew still seems exemplary to me in all respects.

Later on, three of the ship's officers became Heroes of the Soviet Union, and six reached the rank of admiral. But what is perhaps the most important is that each of us has worked conscientiously. You never know where you will have to work or serve in the future.

[Question] There can be no navy without continuity of generations. This continuity is what makes its traditions strong. And in the navy, concern for replacements has always been profound in those who sincerely feel themselves to be seamen. How tangible is the help of DOSAAF organizations in solving this problem?

[Answer] We have a deep interest in seeing that the navy would always be replenished by people who are interested in and devoted to the sea, people with a burning desire to serve aboard ship. Purposeful formation of these qualities in young people is very important. Acquainting thousands of young people with naval affairs and with the harsh romance of naval service, DOSAAF organizations are providing a great deal of help to the navy.

Conscripts who had learned about the sea in DOSAAF are easy to spot. They learn the ropes a short time after joining the ship or unit, and they successfully handle the complex responsibilities of naval specialists. There are an especially large number among them who desire to devote their lives to the navy forever. Graduates of DOSAAF's naval schools are also encountered in large numbers in technical schools training warrant officers, and in higher naval schools. DOSAAF has also done much and is doing a great deal today to provide the fleet with young people devoted to it and enamored with naval service.

[Question] One last traditional question: What tasks face the navy today?

[Answer] Let me answer this briefly: The tasks facing the USSR Navy are tasks which derive from the general task facing the Soviet Armed Forces. These tasks are explained thoroughly in documents of the 27th CPSU Congress, which discuss the need for maintaining our defensive might "at a level which would make it possible to dependably protect the peaceful labor and the peaceful life of Soviet people."

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Chernavin Notes Soviet Navy's History
1801003a Moscow TEKHNIKA I VOORUZHENIYE
in Russian No 7, Jul 87 pp 6-9

[Article by Fleet Adm V. Chernavin, navy commander-in-chief, USSR deputy minister of defense, Hero of the Soviet Union: "Guarding the Ocean Borders"]

[Text] The decree creating the Workers and Peasants Red Navy was signed by V. I. Lenin on 29 January (11 February) 1918. Since that time our navy, which is an

inherent part of the Soviet Armed Forces, has been standing an alert guard over the accomplishments of the Great October Socialist Revolution and over the peaceful labor of the Soviet people.

The successors and continuers of everything valuable and progressive in the history of the Soviet Navy, Soviet seamen are rightfully proud of the brilliant victories of Russian weapons, and of the models of military valor displayed by their forefathers. The best traditions of the Russian navy were developed in the days of October 1917, when in response to an appeal from the party of the Bolsheviks a detachment of Baltic seamen merged with the revolutionary formations, multiplying their strength. The strongest and most battleworthy ships were placed at the disposal of the Military Revolutionary Committee, and their actions were supported by the entire Baltic Fleet.

Together with the Red Army, during the years of civil war and military intervention revolutionary seamen of the Baltic and Black Sea fleets successfully defended Petrograd, liberated the Soviet North from the interventionists, participated in the defeat of White Guards on the Volga, the Caspian and the Sea of Azov, fought enemy ships and interdicted enemy shipping. Over 30 sea, lake, and river flotillas were created out of fleet forces (predominantly of the Baltic Fleet) during the civil war. Around 75,000 seamen fought on land fronts.

During this period our country lost the bulk of its ships, its experienced and knowledgeable commanders, a large number of naval bases and the main nucleus of the Red Navy. As of this time the republic did not yet possess a fleet in the Far East and in the North; nor did one actually exist in the Black Sea, where almost all remaining ships were steered to foreign ports by White Guards. Only the Baltic Fleet and a few river naval flotillas existed. Many ships required major repairs. Over half of the command positions in the navy were occupied by officers of the old Czarist navy. Soviet military personnel required theoretical and practical training.

A decision to resurrect and strengthen the Red Navy and to replenish it with trained personnel devoted to the cause of the revolution was made in March 1921 at the 10th party congress in response to a proposal by V. I. Lenin. The Komsomol, which decided in its 5th congress on 16 October 1922 to take the navy under its patronage, took an active part in its restoration. In just the first 2 years following the congress around 8,000 persons recruited by the Komsomol joined the navy; of them, around 1,000 were sent to naval schools. A movement to collect money for the Red Navy fund was initiated throughout the country. By late 1928 repairs on most ships and vessels remaining after the civil war were completed, battleships, destroyers and submarines were partially modernized, and naval bases were restored. Construction of submarines was started in 1927.

Creation of a strong material base that made it possible to build a navy of a quality satisfying the interests of the country's defense was promoted by socialist industrialization, collectivization of agriculture and the cultural revolution. Series production of destroyers, escort vessels, torpedo boats and minesweepers was started during the Second Five-Year Plan. The fleet of naval airplanes grew significantly, and the number of coastal artillery guns of different calibers increased.

By decision of the Communist Party and the Soviet government the Pacific Fleet was created in 1932 and the Northern Fleet was created in 1933. The Peoples Commissariat of the Navy was formed in 1937 to manage the development of the fleets and their training. It possessed its own budget, its own materiel procurement funds and its own procurement plan. It was given the responsibility of drafting the plans for building and arming ships, manning the naval forces, training personnel, managing operational, combat and political training, coordinating scientific research on the theory and practice of organizing and conducting operations and combat at sea, writing manuals and performing other functions.

The accomplishments of socialist industrialization served as a strong foundation for the navy's subsequent development. A program for creating a large navy in our country in the period from 1938 to 1943 was approved in early 1938. It foresaw construction of ships of all classes—from battleships to torpedo boats. The cruiser "Kirov" was commissioned in the Baltic Fleet in 1938, while in 1940 the cruiser "Voroshilov" joined the Black Sea Fleet and the "Maksim Gorkiy" joined the Baltic Fleet. Cruisers of the "Chapeyev" and "Kronshtadt" class and battleships of the "Sovetskiy Soyuz" class were built. In late 1940 269 ships of all classes were under construction, some of which took part in the Great Patriotic War.

Prominent scientists and designers such as A. N. Krylov, V. L. Pozdnyunin, V. V. Novozhilov, P. F. Papkovich, B. M. Malinin, Yu. A. Shimanskiy, M. A. Rudnitskiy, and V. G. Vlasov made a great contribution to the development of Soviet shipbuilding.

The navy's combat and technical resources enjoyed further development in the prewar years. Thus over 15 of the latest artillery systems of various calibers and purposes were developed by the late 1930s for surface ships and submarines under construction and for coastal defense units. These included antiaircraft systems and railroad systems.

Mines, torpedoes, sweeps, and antisubmarine armament were improved as well. In particular not only surface ships and submarines but also naval aviation was outfitted with new models of mine and torpedo weapons by the beginning of the Great Patriotic War. The first models of ship depth charge launchers and depth charges as well as sonar devices were designed during this period for use against enemy submarines. Artillery and torpedo

fire control instruments were created as well. In addition ships received new radio communication and navigation resources. As the subsequent experience of the Great Patriotic War showed, Soviet naval equipment was not inferior to foreign analogues in its combat characteristics.

At the beginning of the Great Patriotic War the navy had four major operational formations—the Northern, Baltic, Black Sea, and Pacific fleets, and the Danube, Caspian, Pinsk, and Amur flotillas. Its effectives included 3 battleships, 7 light cruisers, 54 destroyers, and flotillas leaders, 22 escort vessels, 80 minesweepers, 287 torpedo boats, 212 submarines, 2,500 airplanes of all types, and 260 coastal artillery batteries.

The combat proficiency of Soviet seamen increased simultaneously with growth of the navy's material base. Coordination of ships in tactical groups and formations was developed, and the tactics of naval combat were improved. Attention was devoted mainly to organizing joint strikes by diverse forces against groupings of enemy surface ships at mine and artillery positions created in straits and at approaches to naval bases.

Created within a short time, the Soviet Navy was capable of successfully conducting combat operations in seas contiguous with our coast. But as the first days of the war showed, the navy's possibilities were limited in view of an insufficient number of assault landing ships, minesweepers, auxiliary vessels, air defense forces, and resources and reserves of naval mines and sweeps.

From the first days of the war, the navy focused its main efforts on maintaining the stability of the maritime flanks of the fronts.

The Northern Fleet helped to break off the enemy's offensive by pitting its ships and aviation against enemy troop groupings pushing toward Murmansk, by carrying out numerous assault landings and by interdicting the enemy's marine shipping. Marine infantry brigades fighting together with ground troops halted the advance of the German mountain warfare corps at the far approaches to Murmansk and the naval base at Polyarnoye. This made it possible for the navy to continue its active operations and to utilize the shortest sea route providing communication between our country and the Allies.

Defending Liepaja, Tallinn, the Moonzundskiye [transliteration] Islands and Hango Peninsula together with army units, the Red Banner Baltic Fleet contained a large grouping of fascist troops. The strength of Leningrad's defenses was determined to a significant degree by the fleet's aggressive actions, which ensured retention of the Oraniyenbaum beachhead. Almost 400,000 shells were fired at the enemy from 360 large and medium caliber guns, including 100 with calibers from 180 to 406 mm, inflicting significant losses on him. The fleet's powerful long-range artillery played the role of a strong

fire shield covering the approaches to the city. Marines defended Leningrad with unprecedented steadfastness. Over 100,000 seamen, petty officers and officers were sent to the Leningrad front by the fleet.

The Black Sea Fleet made a substantial contribution to the defense of Odessa, Sevastopol, Novorossiysk, and the Northern Caucasus. In the more than 2 months of the defense of Odessa the fleet's ships left port 180 times to bombard enemy positions, and it delivered 65,000 soldiers and over 25,000 tons of various cargo to the city. During the evacuation from the city to the Crimea the fleet's ships carried half a million persons and 400,000 tons of cargo. Fleet formations evacuated from Odessa rose to the defense of Sevastopol together with the Maritime Army. An enemy grouping of 300,000 men was contained in the Crimea for 8 months, preventing it from participating in the Battle of the Caucasus.

Naval seamen also made a substantial contribution to combat activities on land fronts. By decision of the State Committee for Defense in July-August 1941 the navy formed 12 artillery batteries and 25 separate marine rifle brigades for the defense of Moscow. In all during the war, the navy sent around half a million officers, petty officers, and seamen to land fronts, where they served in more than 40 marine infantry and rifle brigades, six separate regiments, and a large number of separate battalions and detachments. These formations and units displayed high fighting qualities. Moreover marine infantry units within the composition of the fleets and flotillas (around 100,000 men) defended islands and naval bases from land, and participated in assault landings. Over 250,000 men were landed together with equipment and armament in the course of combat operations in maritime sectors. Up to 2,000 ships, several thousand auxiliary landing resources, and around 10,000 airplanes participated in the operations.

Naval flotillas operating on inland seas, large rivers and lakes—the Azov, White Sea, Volga, Danube, Ladoga, Onega, Pinsk, and others* provided significant assistance to the fronts.

The White Sea Flotilla supported communication in arctic regions and movement of ships and convoys on the Northern Sea Route. The Ladoga Flotilla defended lines of communication through Lake Ladoga to besieged Leningrad—the Road of Life. The Danube Flotilla fought its way more than 200 km upstream and participated in the liberation of six European states from the fascist invaders. The Volga Flotilla took an active part in the Battle of Stalingrad. The Pinsk Flotilla participated in the Battle of Kiev in the initial period of the war. It fought its way hundreds of kilometers up the rivers and canals of East Europe, ending its battle road on the River Spree, in Berlin. The Dniepr Flotilla assisted in the crossing of water obstacles. Its ships participated in the landing of 35 assault forces.

The Pacific Fleet and the North Pacific and Amur flotillas made an important contribution to the defeat of imperialist Japan. In August 1945 they participated in the liberation of Southern Sakhalin, the Kuril Islands, Korea, and Manchuria. Owing to swift assault landing operations by Pacific Fleet forces communication was interrupted between the continent and Japan's Kwantung Army, which made its complete encirclement possible.

During the war around 1,400 transporters with a total displacement of up to 3 million tons and more than 1,300 ships were annihilated on enemy lines of communications. This tangibly affected the outcome of the war.

Our industry supplied an adequate quantity of armament and technical resources to the navy during the war. During this time the navy received two light cruisers, 19 destroyers, 38 minesweepers, 54 submarines, and around 900 combat launches of different types.

Scientists, designers, and engineers continually improved the combat characteristics of armament and technical resources, and created new equipment. Thus various types of radar stations began to be installed aboard the ships. Mines and sweeps acquired new qualities owing to introduction of fundamentally new devices developed by outstanding Soviet scientists. Marine aviation, especially torpedo-carrying aviation, the strength of which more than tripled, grew quantitatively and qualitatively.

The navy made an honorable contribution to victory over fascist Germany and imperialist Japan. It ensured stability of the strategic flanks of the ground troops, and dependable support of our troops in defense and offense. The navy justified the hopes laid on it and the high trust of the Soviet people, and it fulfilled its duty before the motherland completely.

Unleashing a cold war against countries of the socialist fraternity, during the postwar years imperialism began preparations for a new world war. An ever-clearer threat to our country's security advanced in oceanic sectors. The Soviet Union could not condone such a situation, especially because vast regions of the World Ocean were becoming launching pads for nuclear missiles. A worthy response was needed. And around the middle of the 1950s the navy embarked upon a new stage in its development in accordance with a decision of the CPSU Central Committee: Creation of an ocean-going nuclear missile navy was started. The navy underwent qualitative transformations as the accomplishments of scientific-technical progress were introduced: transition to construction of nuclear-powered submarines and surface ships, introduction of missiles and nuclear weapons, and creation of marine strategic nuclear missile systems; introduction of long-range aviation into the fleet; installation of aviation equipment aboard ships; development

of modern antisubmarine warfare resources; wide introduction of radioelectronics, automation of weapon and combat equipment control, and use of mathematical methods and computer technology to make operational and tactical calculations.

The Soviet ocean-going navy now possesses combat equipment and weapons on par with the latest accomplishments of science and technology and satisfying all requirements of armed struggle at sea. Nuclear-powered missile submarines serving in their appointed regions are the backbone of the navy's strike force. Our multipurpose submarines, mighty missile cruisers, large antisubmarine ships and modern destroyers are confidently carrying out complex tasks on the wide ocean expanses. Coastal and ship-based marine aviation, which is characterized by considerable striking power, has become one of the most important means of armed struggle at sea, increasing the might of the navy. Owing to high equipment availability the possibilities of marine infantry and coastal rocket artillery units have risen immeasurably.

The navy's organizational structure and its basing and logistical support system have enjoyed further development.

Creation of new ships and airplanes, propulsion units and weapon, communication and control systems required enormous outlays of effort and energy, persistent enquiry and creative inspiration from scientists, designers, engineers and laborers. Naval seamen are respectful of and grateful for the selfless labor of ship-builders and of all Soviet people who are creating the state's economic and defensive potential.

Soviet naval seamen understand that because aggressive imperialist forces, and chiefly the USA, have assumed the course of undermining the military-strategic equilibrium and expanded the scale of military preparations, they must persistently improve the combat readiness of the ships and units, so as to guarantee an immediate repulse to any aggressor.

The navy has nurtured command personnel fully satisfying the high requirements of ship service and ocean cruises. These are well trained specialists who are politically mature, wholly devoted to the socialist motherland and capable of carrying out diverse and complex tasks. During long cruises they develop the coordination and interaction of homogeneous and diverse naval forces in a complex situation, and they search for new, more effective methods and procedures for using weapons, controlling forces and executing tactical and fire missions. All of this requires a creative approach to the work, high responsibility and strict exactingness from the personnel when they analyze and evaluate their work.

It is the duty and responsibility of commanders, staffs, and political organs to fight seriously for stably high preparedness of battle station crews, and for coordination and efficiency in the work of crews. They must persistently search for new forms and methods of improving the quality of the training process, help ship and unit commanders to organize combat training correctly, and try to reduce the time and increase the quality of mastering weapons and equipment.

All combat work of naval seamen, ranging from serving watch at battle stations to participating in gunnery exercises, is permeated by a spirit of rivalry. Military collectives responsible for initiating socialist competition in the navy are honorably playing their right-flank role. Last year the nuclear-powered submarine of the Red Banner Northern Fleet commanded by Captain 1st Rank V. Ivanov successfully fulfilled its responsibilities and earned recognition as an outstanding crew. The baton of the naval competition proceeding under the slogan "We will fulfill decisions of the 27th CPSU Congress and mark the 70th anniversary of Great October with selfless military labor!" was passed from Northern Fleet seamen to sailors of the Pacific Fleet—to the crew of the nuclear-powered submarine commanded by

Captain 1st Rank V. Nikolayevskiy. The submariners successfully carried out the tasks of their ocean cruise and fulfilled all combat exercises with high scores. Over half of the personnel of this ship are outstanding soldiers and rated specialists.

Responding to the concern of the Communist Party and the Soviet government for the navy, and deeply recognizing their responsibility, naval seamen are standing an alert watch beside nuclear reactors and airplane controls, and they are alertly controlling electronic systems, formidable missiles and other combat equipment and armament. They have demonstrated on many occasions that the equipment and weapons entrusted to them are in competent hands.

No matter what tasks they are called on to carry out, warships sailing beneath the Soviet flag are an impressive restraining factor in the path of imperialist aggression and military adventures.

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Improving Political Information After Chernobyl
18010196a Moscow VOYENNYYE ZNANIYA in
Russian No 4, Apr 87 p 10

[Article by Maj Gen Ye. Prokhorov, deputy chief for political affairs, Ukrainian SSR Civil Defense Headquarters: "To the Awareness of All"]

[Text] Events at the Chernobyl AES have become a serious lesson for us. They compelled us to rethink the evolved practice of organizing party political work and civil defense propaganda.

In the first days following the accident, workers of the civil defense headquarters of the republic and of Kiev, Zhitomir and Chernigov oblasts turned to local party and soviet organs with specific proposals as to how to better organize information to the public on the radiation situation, on the clean-up and on safety precautions to be taken by people residing in rayons adjacent to the AES.

In short time active party and soviet workers, civil defense staff and course workers and members of the Znaniye Society who regularly speak on civil defense topics were organized into lecture groups. The party raykoms scheduled their lectures to personnel of formations called in for the clean-up and to local residents. As an example just between May and August of last year a large number of lectures and reports on the rules of behavior of the public in areas of radioactive contamination were given in Borodyanskiy Rayon, Kiev Oblast.

To assist the lecture groups, workers of the Ukrainian SSR Civil Defense Headquarters quickly prepared propaganda materials on the following topics: "The 27th CPSU Congress on the Need for Strengthening the Country's Defense Capabilities. Growth of the Role of Civil Defense in Modern Conditions," "Protection of the Population Against High Radioactivity." They also prepared a large quantity of reference material pertaining to the accident.

The evolved situation and the nature of the tasks performed by the republic's civil defense system necessitated more-flexible and dynamic forms of propaganda, and a differentiated approach to its conduct. In Kiev Oblast, for example, agitation-propaganda brigades were created to conduct explanatory work among the public and the personnel of nonmilitarized civil defense formations. Civil defense course instructors and civil defense headquarters workers B. Rudenko, A. Kocherga, A. Kostyuchenko, A. Kutsenko and V. Andrusha were especially successful.

Workers of local party organs took an active part in propaganda. Thus N. Mironov, first secretary of the Borodyanskiy Rayon Committee of the Ukrainian Communist Party, V. Polishchuk, an instructor of the Kiev Oblast Party Committee, and V. Mirnenko, second secretary of the Chernobylskiy Rayon Committee spoke to

laborers of industrial enterprises and agriculture, to personnel of nonmilitarized formations and to the public on one political day, discussing the topic "Chernobyl—Courage, Unity, Brotherhood."

Other functions that were widely practiced during the clean-up at the AES included meetings and discussions with families, brief reports on steps presently being taken, replies to questions, and explanation of reference material and leaflets on rules of behavior prepared by the republic's Ministry of Public Health and the Ukrainian SSR Civil Defense Headquarters. Members of Red Cross medical teams described the permissible radiation levels, the safety measures and the precautions. They also discussed these issues on local radio, and they conducted individual discussions during house calls. And judging by the results all of this had a positive effect on the morale and the psychological state of people in the accident zone.

Local party organs and civil defense headquarters devoted special attention to individual work with members of formations working in operational groups and in the dosimetric monitoring service directly within the vicinity of the AES. The exemplary experience of those who distinguished themselves in the struggle against the accident was told in combat leaflets and bulletins. And it must be said that there were no examples of indifference or an unconscientious attitude toward fulfillment of assignments on the part of civil defense headquarters and course personnel.

Cultural and educational institutions took an active part in agitation, propaganda and mass cultural work with people involved in the clean-up. For example a cultural army brigade was created by the Palace of Culture of Ivankovskiy Rayon, Kiev Oblast. In May-July it traveled into the 30-kilometer zone 35 times, where it gave lectures, reports and amateur concerts to dosimetric specialists, medical workers, communication workers, drivers and builders.

Correspondent posts were created in the Ukrainian SSR, Kiev, Zhitomir and Chernigov oblast civil defense headquarters in order to increase the activity of the mass media in civil defense propaganda. Staff specialists kept journalists of republic and oblast newspapers informed about events in Chernobyl, and answered their questions. Such meetings made it possible to organize regular information on the situation in the accident area and on the selfless and courageous deeds of people fighting its consequences.

The same can also be said of the work of radio and television. Broadcasts were made practically daily in the first months. Specialists of the civil defense headquarters of the republic and of the oblasts mentioned above took an active part in preparing these broadcasts. The public displayed great interest in a series of radio broadcasts on the topics "The Truth and Fabrications About the Accident at the Chernobyl AES," "What You Need to Know

About the Radiation Situation," "How to Conduct One-self in the Face of Radioactive Contamination," "Scientists and Specialists Reply," and so on. The best broadcasts were repeated several times. All of this made it possible to promptly answer the public's numerous questions, and to competently fight the fabrications of bourgeois propaganda and various rumors and distortions.

But at the same time a number of shortcomings were also revealed in the organization of civil defense propaganda. For example prior to the events at the AES the broadcasts were dominated by general topics—the possible nature of nuclear missile war and the main destructive factors of modern weapons, while little attention was devoted to the safety precautions that must be observed in the vicinities of nuclear power plants and other facilities where accidents may occur. Civil defense propaganda requires a special approach in relation to blue and white collar workers employed at nuclear power plants. Nor did we consider the conditions under which people live near dangerous national economic facilities. As the events at Chernobyl showed, civil defense propagandists must be prepared not only to give lectures and reports but also to conduct discussions in the homes of citizens, and to explain certain problems generated by the situation.

The mass media did not join the civil defense propaganda effort right away after the accident at the AES. As a result people did not have a clear impression of what had happened in the first days after the accident. This promoted circulation of fictions about the state of affairs in the plant's vicinity, and it created a nervous atmosphere in the work of individuals and often entire collectives. Unfortunately there were also few films that could explain the rules of behavior of people in regions characterized by a high radiation danger. Many training films do not satisfy modern requirements because of their poor content and because they are badly made.

The situation persuasively demonstrated how important civil defense knowledge and skills are to all people. This is why preparation of all strata of the population for defense against mass destruction weapons and for competent actions in the face of national disasters and industrial accidents is a priority task of civil defense workers. The planning of our future work must foresee solution of these problems. We must make more active use of the diverse forms and methods of civil defense propaganda, keeping in mind that it is an inherent part of military-patriotic indoctrination. Consequently we need to do everything we can to help each person understand his place in the overall effort in the struggle to strengthen the motherland's defense capabilities.

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11004

Ukraine: Difficulties in Construction of Training Center

18010196b Moscow VOYENNYYE ZNANIYA in Russian No 4, Apr 87 p 13

[Article by B. Konovalov, chief, combat training department, Transcarpathian Oblast Civil Defense Headquarters: "We Built a Training Center"]

[Text] The idea for creating our own civil defense training center in the oblast came into being long ago, but whenever we got to the point where we were ready to directly implement this idea, difficulties and problems immediately arose: where to build it (on whose territory), what sort of soil would be encountered in the given place, who is to be responsible for security and so on. And inasmuch as there was not much choice, we decided upon the most realistic choice—the oblast's training ground. True, this was not the ideal choice: The clay soil was perpetually waterlogged. But weighing all of the pros and cons, we decided to build here. We also immediately determined the responsible organization—the oblast civil defense training school.

Our idea was supported at that time by Lieutenant General I. Kovbasuk, deputy chief of the Ukrainian SSR Civil Defense Headquarters. Within just a few days we submitted a plan and a sketch of the future training center to him for coordination. In drawing them up we took account of the civil defense training center that was built in Ufa (Voyennyye Znaniya, No 6, 1983), the requirements imposed today on the training material base, the strength of nonmilitarized general-purpose formations and civil defense services in Transcarpathian Oblast, the particular operations of our production facilities, and the conditions for conducting oblast competitions both day and night. But most importantly the training center had to provide a possibility for different formations to commit their forces simultaneously and to participate in the corresponding practical exercises. Therefore our sketch foresaw a central paved two-lane road, a perimeter road providing access to all areas of the training center and the central post (from which the actions of the formations could be observed), and a water channel around the training center to drain the territory (see the diagram of the training center on p 4 of the insert [not included in this translation]).

In order to permit preparation of the draft decision of the oblast executive committee on planning and building the training center, we had to determine who would do the planning, who would build the center, and where the money would come from. The training methods council of the oblast civil defense headquarters examined the sketch of the training center and proposed that the oblast administrations, trusts and associations build the center with their own assets on a proportionate basis, and that each civil defense service should build the area in which its formations would be trained. Everybody would be

interested in the project in this way. Other organizations were also encouraged to participate with regard for their possibilities and the availability of equipment and construction materials.

The Zakarpatyevodstroy Trust started uprooting the trees and brush and digging trenches around the perimeter of the future civil defense center. Following that, the territory was divided into lots in accordance with the general plan, and the corresponding organizations were asked to begin construction of the training places.

But not everything went smoothly. A dispute with the Uzhgorod Aviation Enterprise concerning the territory of the training center went on for more than half a year. There was even a need to gain the assistance of the Ukrainian SSR Civil Defense Headquarters and the Ukrainian SSR Civil Aviation Administration. It was not until after this that the issue was resolved. There were difficulties with materials. Planning sessions were held regularly. They were attended chiefly by those against whom complaints concerned with work quality and organization were voiced. In one of them, M. Malevanik, chairman of the oblast executive committee, ordered the oblast planning committee to strictly monitor problems concerned with material supply and assignment fulfillment.

Thus nonmilitarized formations were recruited for the work in the course of their specialized tactical exercises, but experience revealed that this was not a suitable thing to do. In addition it was found that the responsibility for planning and construction had to be assigned to another department more competent in these matters, and least of all the combat training department.

Oblast planning committee chairman L. Lutsyk, Agrostroy Association chairman D. Grinshteyn, oblast municipal services administration chief engineer A. Kartashov and oblast repair and construction trust director I. Leontyuk were very conscientious about carrying out their work. They were constant visitors to the construction site, and they displayed an interest in construction progress. And on being instructed to begin construction of an equipment decontamination station, I. Dashchenko, chief of the oblast motor transport administration, immediately appeared at the construction site together with associates from the capital construction department and enterprise executives. They built a recycled water washing station, and they installed underground water containers. A. Kartashov offered proposals on how best to simulate accidents affecting the water line, and how to get the water line to the training center installed more quickly so that the workers would be provided with drinking water. In a word, they actively sought all possibilities and ways of fulfilling the work with high quality. Special mention should be made of A. Kilmetov and V. Dol, the civil defense chiefs of staff of the oblast motor transport service and the oblast road

administration respectively. Maintaining constant contact with the combat training department of the oblast civil defense headquarters, they kept the latter regularly informed about the work progress and about unsolved problems.

But unfortunately not everyone displayed such conscientiousness toward their work. For example P. Moroz and I. Pokhel, directors of the Zakarpatstroy and Zakarpatstselstroy trusts respectively, took an entirely different approach, looking for ways to avoid fulfilling the oblast executive committee's decision or to postpone it indefinitely.

Many facilities of the city of Uzhgorod and the oblast's rayon are now regularly performing their functions in our training center on the basis of an approved schedule, and executive rallies, demonstration lessons and exercises are being organized. The entire territory of the training center (around 4 hectares) is broken down into independent areas. There are 13 of them in the training center, intended for practical work by formations of different kinds. Oblast television broadcasts reports from here, and amateur motion pictures are being filmed. The center's popularity is growing.

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11004

Pamphlet for Formation Commanders

18010196c Moscow VOYENNYE ZNANIYA in
Russian No 4, Apr 87 pp 15-18

[Formation commander training articles: "Repairing Damage and Correcting Malfunctions in Bomb and Radiation Shelters (Topic 49)"; Decontaminating Fields and Barns (Topic 103)]

[Text]

Shelter Repair

Advice on Training Methods

This lesson is intended to last 2 hours, and it is conducted in a prepared shelter. Suggested study problems are: repairing damage and correcting malfunctions associated with discontinued supply of air, power and water to the shelter; restoring shelter airtightness, repairing air ducts and pipelines, fighting fires; evacuating shelter occupants.

Because few national economic facilities possess shelter servicing formations, it would be suitable to bring formation commanders from a number of facilities of the city or rayon together for one lesson. The lesson is conducted by the civil defense chief of staff of the city or rayon (major facility) or by a bomb and fallout shelter maintenance worker trained for this purpose.

In order for the lesson to be instructive special training stations must be set up, personnel of the shelter maintenance team must be prepared, and the shelter must be provided with the tools and materials needed for practical work. At the first training station the instructor works with the students on the methods of repairing damage affecting normal operation of the air, power and water supply system. The instructor uses the second training station to work on problems associated with restoring the airtightness of the shelter. Here he demonstrates repair of air ducts, pipelines and power cables. Evacuation of occupants from the shelter is practiced at the third training station.

The lesson should conclude with a brief critique in which the actions of the students are evaluated, mistakes are noted, and the ways of correcting them are pointed out.

Repairing Damage and Correcting Malfunctions Associated with Discontinued Supply of Air, Power, and Water to the Shelter

If the enemy employs nuclear missiles, shelters may suffer serious damage, and supply of air, water and power may be discontinued. One of the causes of interruption of the supply of air to a shelter may be obstruction of or damage to air intake channels. If steps are not taken in time, further presence in the shelter would be impossible after 2-5 hours (depending on the number of occupants). Therefore the shelter maintenance team commander (commandant) must immediately begin efforts to restore air supply.

When the air intakes of shelters of older designs are obstructed, the airtight valve of the emergency air duct must be opened and the filtered ventilation unit must be turned on. In modern structures the airtight valve joining the air ducts of the clean-air ventilation and filtered ventilation systems together should be turned on in this situation, and air should be fed to the filter-absorbers from the clean-air ventilation system, which is located as a rule in a zone not subject to obstruction. If the air inflow is inadequate, the doors must be opened at least for a short while, and the compartments must be aired. But first of all the radiation and chemical situation outside the shelter must be clarified. If radioactive contamination or toxic agents are detected, the shelter occupants must put their gas masks on.

Air inflow into a shelter may also be discontinued due to an interruption in power supply. In this case the team (group) commander immediately gives the command to turn on the diesel power plant and takes steps to correct the malfunction. If the shelter does not possess a diesel power plant, air is supplied by hand-operated fans. Groups of two persons each are appointed from among the shelter occupants to turn the fans. These groups replace each other every 15-20 minutes. Normal air inflow into the compartments is achieved by turning the crank of the fan at 45-48 rpm.

Together with the personnel of the shelter maintenance team (group) the instructor shows the students how to switch the airtight valve on the air duct, and he teaches them how to use the hand-operated fan.

Air is supplied to a fallout shelter either by natural airing or by mechanically induced ventilation. In the latter case if the power is disconnected, once again the hand-operated fans should be used, or air should be supplied from outside the shelter. Simple bicycle-drive fans and mechanical bellows can be used to supply air. Mechanical bellows are made from rubberized fabric (oilcloth), set up inside the structure, and operated by a lever.

The instructor turns the attention of the formation commanders to the fact that the engineering equipment must be kept constantly serviceable. Therefore during annual inspections the condition of filtered ventilation equipment, entrances, emergency exits and air intake and exhaust valves, the airtightness of doors and hatches and the serviceability of utility networks and the diesel power plant must be checked carefully.

The shelter power supply is needed for operation of electric motors of the air supply system and the artesian well, the electric drives of internal equipment, and lighting. Power is supplied from the city network, and if the latter is damaged, from a diesel power plant. The latter is located in a room separated from the shelter's main compartments by an airlock with airtight doors. The power supply team commander (electrician) is responsible for keeping the power plant ready for work.

Power supply may be discontinued owing to both damage (destruction) of the external power source and damage to electrical equipment inside the shelter. In the former case the shelter maintenance team commander gives the order to turn on the diesel power plant. The formation personnel do everything they can to keep the plant operating stably, they disconnect nonessential consumers from the power plant, they cut back the light intensity, and after the emergency power source is turned on, they look for the causes of discontinuation of power supply within the shelter, and they take steps to eliminate them.

Storage batteries and electric lanterns are used for emergency lighting in shelters not equipped with a diesel power plant. Candles and kerosene lanterns and lamps can be used only for a short time, under the direction of the team commander and when their use is extremely necessary (to repair damage, to provide aid to a casualty and so on). In fallout shelters, manual or bicycle drive generators can be used in such cases in addition to battery-powered lanterns, lamps and candles.

The water supply system provides shelter occupants with drinking water and water for hygienic needs. If water is supplied to the shelter from the city water supply network, a consumption norm is not established. In other cases the norm is 3 liters of water per day per person (this pertains to drinking water).

Emergency water reserves are created in case of damage to the water line. This water is stored in permanent tanks hung from the ceiling or walls. They are filled with water from the external water supply network. Water in the tanks is constantly recirculated. Noncirculating tanks are filled at the time the shelter is being prepared for reception of shelter occupants. Artesian wells are installed in large capacity shelters.

The water reserves of low capacity shelters (less than 300 persons) may be stored in portable containers (barrels, cans, buckets) with tight-fitting lids. When the water supply breaks down, strict control is established over water consumption, and water supply to wash basins and drain tanks is discontinued. Water is stored in fallout shelters in barrels, cans, buckets and other containers.

When shelters are located in places with a high water table, shallow shaft or point wells are used as an emergency source, because ground water is protected practically completely from contamination by radioactive substances and toxic agents.

Restoring Shelter Airtightness, Repairing Air Ducts and Pipelines, Fighting Fires

After the enemy uses nuclear missiles cracks and gaps may form in shelter walls and ceilings, and airtight protective doors and hatches may become deformed. As a consequence the airtightness of the shelter would be disturbed, and contaminated air would begin penetrating into the shelter. To restore the airtightness of the shelter's enclosing structures, the locations of cracks and gaps should be determined first. They can be found by watching the behavior of the flame of a candle or match while the ventilation is working and the doors are closed. Isolated cracks can be covered with vinyl chloride film or plugged with clay. If the cracks are small, the entire damaged area is covered or plugged. Large cracks and gaps are filled with cement slurry. To achieve the needed bonding between the old concrete and the new slurry, the crack is pointed—that is, its edges are cut at a 45° angle.

Deformations and skewing of a door frame are straightened with a sledgehammer, crowbar or other available tools. Cracks or gaps that form on doors are taped closed.

Fires arising in a center of nuclear destruction present a serious danger to people in shelters. This pertains especially to petroleum refining and petrochemical industry facilities, where fires may affect a large area and shelters may find themselves within a zone of high temperatures and dangerous concentrations of carbon monoxide. As a result the temperature in the shelter would increase dramatically, and the low concentration of oxygen and the greater quantity of carbon monoxide gas in the air would make it impossible to use the filtered ventilation system for air supply, making it impossible for people to remain in the shelter. Under these conditions the shelter maintenance team commander gives the order to immediately discontinue supply of outside air, to turn on the

regenerating system (if the shelter possesses three air supply systems), and to shut the exhaust openings and channels. When the temperature in the shelter rises above 28°C, air coolers are turned on. The carbon monoxide filter and the heat filter are also turned on if they are available.

The students should be told that the first thing they must do is prevent penetration of smoky and hot air into the shelter through openings for utility networks and around airtight protective doors and hatches. This would require keeping the quantity of inflowing air so •ewhat greater than the quantity of outflowing air, which can be done by installing compressed air tanks in the shelters or using special filters to remove carbon monoxide from inflowing outside air. This air is then cooled in air coolers, in which gravel or rock chips (coarse sand) are used as heat filters.

If fire breaks out inside a shelter, it must be put out with available resources. If this is impossible, steps must be taken to keep the fire contained within one room or compartment; airtight doors and ventilation channel louvers must be shut in such a case. Power must be shut off before putting out burning wiring. Oxygen and compressed air tanks and regenerative canisters must be taken to a safe place. The gas composition of the air is constantly monitored: The concentrations of oxygen, carbon dioxide, and carbon monoxide are determined.

During his narration the instructor should display an air regenerating unit, a heat filter and an air cooler; during this time the shelter maintenance team should perform the necessary operations with these devices in the manner they had been instructed to do so prior to the training.

Damage to air ducts and pipelines can also cause serious complications affecting the possibility of further presence of people in the shelter. Cracks, ruptures and weak spots can be repaired by applying temporary rubber belts, winding string over them, capping off the pipes and driving in wooden plugs. If the damaged section of the pipeline cannot be repaired, it is disconnected at the nearest flange couplings, and a cap is installed over the flange of the serviceable pipeline, or flexible rubber hose inserts are used where possible. Points of damage on air ducts are covered with sheet rubber (polyvinyl chloride film) patches and secured with belts or wire.

Before repairs on a power or lighting cable are carried out, the power must be disconnected. Then the damaged cable sections are repaired using patching cable and clamps (bolt couplings).

Damage to cables is repaired as follows. First the damaged sections are cut out, then the ends of the patching cables are cleaned, and after this the strands of the damaged cable are connected by twisting or clamping

them together. The connections are mandatorily insulated. The repaired sections must be checked periodically to make sure they are not overheating.

The personnel of the shelter maintenance team demonstrate the different ways to repair air ducts and pipelines. When necessary the instructor also asks the students to participate in this work.

Evacuating Shelter Occupants

A nuclear burst may cause partial or total obstruction of shelters. In this case the commander of the shelter maintenance team evaluates the situation, determines the possibility for further presence of people in the shelter, and when necessary he organizes the shelter occupants to dig their way out on their own without waiting for help from rescue units.

Clarifying whether or not people can be evacuated through the emergency crawlway is the first thing to do. Its exit structure is usually located outside the zone of collapse of building structures, and therefore the probability that it would be obstructed is significantly lower than the probability of obstruction of the main exit. Evacuation of shelter occupants through the emergency crawlway in the following order is recommended: First a few people are led out to the surface so that they could help those who cannot leave the shelter on their own; then children and the elderly are evacuated, followed by the rest of the occupants. But before all of this, reconnaissance should be conducted in order to determine presence of radioactive or chemical contamination.

The students should also practice what to do in the case where the shelter is in an area of dense urban buildup, such that a shock wave may cause collapse of buildings and consequent obstruction of the exit structure of the emergency crawlway. Steps are taken in this situation to clear openings (passages) through the obstruction and to get two or three persons up to the surface. The latter can then clear the obstruction and assist in removal of the shelter occupants.

In the absence of an emergency crawlway, people are evacuated through the main exit. If it is impossible to open the protective airtight door, it must be removed from its hinges with a crowbar, a screw jack and other tools, and moved aside. The obstruction is dismantled through the opening formed in this way (fragments are carried inside the shelter), and the exit is cleared.

When using the emergency crawlway and opening the airtight protective door are both impossible, an opening is punched through a wall so that the shelter occupants could move to another place—a hallway or a neighboring basement. But this method is used only in bomb shelters of older design or in fallout shelters. The enclosing structures of modern bomb shelters are made from high-strength reinforced concrete, and therefore the main way to get out of a shelter when the entrances are

obstructed is to clear them or to use emergency crawlways. Safety precautions must be strictly observed when dismantling obstructions and punching holes through walls. People doing the work should wear hard hats and eye protection.

In conclusion the instructor should recall to the students that the effectiveness with which shelters are used depends not only on their technical serviceability and their readiness to receive shelter occupants, but also on how well the personnel of formations responsible for maintaining bomb and fallout shelters know their layout, the purpose of shelter equipment and the rules of its operation in different situations, and on their ability to repair damage and correct malfunctions with speed and technical competence.

Field, Barn Decontamination

Advice on Training Methods

Two hours are allotted to the lesson on the topic "Organizing Decontamination of Fields and Barns in a Center of Combined Contamination." The lesson is taught by the chief of the animal and plant protection service or by the chief veterinarian (zootechnician). The students include team, detachment and party commanders, brigade leaders and directors of livestock farms and divisions.

The appropriate training aids, collections of samples of chemical decontaminating agents, personal protective resources, chemical and radiation reconnaissance and dosimetric monitoring instruments, and tables of the combat characteristics of vehicles and mechanisms must be prepared for the lesson. Samples of special and agricultural equipment used for decontamination should be positioned for demonstration purposes on the territory of the livestock farm or training ground.

This topic is a continuation of topic 102, "Veterinary Animal Processing in a Center of Chemical Contamination" (Voyennyye Znaniya, No 2, 1986). The following training problems may be examined during the lesson: resources and methods for chemical and radioactive decontamination and disinfection of land and barns; special and agricultural equipment used for decontamination; safety measures.

Decontamination Resources and Methods

The principal forms of decontamination are performed in combined centers of contamination. That is, all contaminated surfaces of objects and land are subjected to chemical and radioactive decontamination and disinfection to safe limits. Insect and rat control are performed as necessary as well.

Prior to decontamination operations, civil defense reconnaissance subunits establish the combination in which weapons were used, the degree and nature of

affliction of people, livestock and other objects, and the possibilities for conducting the operations. If the radiation levels permit work in the center of contamination, chemical decontamination is performed first, followed by disinfection and radioactive decontamination. Inasmuch as the same methods and substances are used for chemical decontamination and disinfection, they may be carried out concurrently.

Chemical decontamination is defined as neutralizing or removing toxic agents. This can be done mechanically, physically and chemically. Mechanical decontamination requires removal of the contaminated layer to the depth to which the toxic agent has penetrated. Physical decontamination involves decomposing the toxic agent by means of high temperature, and removing it by solvents. Chemical decontamination involves neutralizing or breaking down the toxic agent by chemical resources. These methods are used separately or in combinations depending on the form of the toxic agent and other factors.

When land is decontaminated mechanically, the contaminated layer of earth or snow is removed by hand, or equipment is employed (scrapers, bulldozers, power shovels). Earth is usually removed to a depth of 10 cm, while snow is removed to a depth of 20-25 cm. In certain cases a contaminated area is covered with earth, sand or peat, or it is blanketed with timbers, boards and branches.

In physical decontamination, the upper layer is burned with a blow torch or special flame producing devices. Dichloroethane, carbon tetrachloride, gasoline, kerosene and alcohol are used as solvents.

The chemical method of decontamination based on using oxidizing and chlorinating agents has enjoyed the widest acceptance. Such agents include bleaching powder, the dibasic salt of calcium hypochlorite (DS-GK), the 2/3- basic salt of calcium hypochlorite (DTS-GK), sulfuryl chloride (KhS), monochloramine B (DT-1) and dichloramine B (DT-2). Alkaline decontaminating substances include caustic soda, ammonia, calcium hydroxide, sodium sulfide, sodium carbonate and ammonium bicarbonate.

Decontaminating land is a laborious process, which is why rather than decontaminating the entire area of a farm or a complex together with the facilities located within it, we first decontaminate those areas in which human and animal traffic and movement of cargo, agricultural products, feed and forage are possible. The remaining contaminated areas are marked off with warning signs.

If the ground is loose, the following procedure is used to decontaminate roads and passageways: Bleaching powder is poured over the contaminated area at a rate of a kilogram per square meter and plowed in to a depth of 3-4 cm, after which another coat of bleaching powder is applied.

Contaminated areas of hard ground, asphalt and concrete pavement are processed with bleaching powder or DTS-GK (half a kilogram per square meter); 20 minutes after this, the area is irrigated with water (at a rate of 1 liter per square meter). The procedure is reversed when it is windy. In addition areas paved with concrete or asphalt may be processed with 1-1.5 percent DTS-GK solution, 5 percent caustic soda solution and other decontaminating agents.

Barns are decontaminated with 10-20 percent chlorinated milk of lime or 5 percent sodium sulfide solution. Bleaching powder may be substituted by calcium hypochlorite or quicklime. Sulfuryl chloride, hot 5-10 percent caustic soda solution or 10-12 percent ammonia water can be used when the air temperature is below 5°C.

Inside a barn, first the walls, feeding racks and floors are processed, then manure and trash are removed, and the floors are processed again. Manure is burned or carried to a specially allocated place for burial.

Metallic objects are exposed to flame or boiled for 2 hours in 1-2 percent soda solution. Chlorinated lime slurry is applied to wooden feeding racks, troughs, picket lines and other objects, which are rinsed with water 1.5-2 hours later. Wooden objects of little value are burned.

These same resources and methods can also be used in disinfection, while the mechanical method can be used in radioactive decontamination.

After decontamination is completed, samples are taken from the processed objects and sent to the laboratory for analysis for toxic agents. Processing effectiveness is determined locally by means of VPKhR chemical agent detectors or PKhR-MV chemical detection devices.

It would be pertinent at this point for the instructor to demonstrate samples of decontaminating agents, the VPKhR and PKhR-MV instruments and personal protective resources.

Radioactive decontamination is defined as the removal of radioactive substances. It is carried out by three methods: mechanical, where radioactive substances are removed from the surface of a contaminated object; physicochemical using decontaminating solutions; chemical, in which radionuclides are transformed into complex compounds and then removed. The first two have enjoyed the widest acceptance, and therefore they should be explained to the students.

As in the case of chemical decontamination, the upper contaminated layer is either removed or covered with uncontaminated earth. Radioactive dust is washed from surfaces with water or sucked off by vacuum cleaners

and other vacuum devices. Paved roads and passageways are washed with water under pressure (at a rate of 3 liters of water per square meter). Areas of loose earth are plowed under.

High quality radioactive decontamination requires the use of special 3 percent solutions of OP-7 or OP-10 surfactants, or laundry detergents, lime liquor or tallow soaps.

Radioactive substances are washed off of barns by a strong stream of water, beginning with the roof and then processing the walls, doors and windows. The water stream should be directed at a 30-40° angle to the surface. Brushes and brooms with long handles can be used to decontaminate roofs and walls.

Ditches are dug to collect water contaminated with radioactive substances. These ditches lead to absorbing pits (sumps), in which the contaminated water collects. The ditches are lined with film so that the water would not seep into the ground. After the work is finished the pits are buried. Radioactive substances removed from objects and the water must be buried.

Decontamination of a barn interior begins with removing trash and manure after first irrigating the floor with water (raising dust should be avoided). Manure and trash contaminated by radioactive substances are transported to specially allocated areas for burial. Walls, partitions, stall floors, feeding racks and passages are carefully washed with water, which flows down liquid manure channels to a special pit, out of which it is later pumped and carried away. Animal care articles are washed and simultaneously cleaned with brushes. They may be decontaminated with laundry detergents, soap, soda, lime liquor, and solutions of OP-7 and other surfactants.

Besides equipment used in chemical decontamination, mechanisms and units that supply water under pressure are used for radioactive decontamination—sprinkling machines, firefighting equipment, motorized pumps, tractor- and truck-mounted pumps, and hydrants.

After radioactive decontamination is completed, dosimetric scouts use DP-5 instruments to check the effectiveness of decontamination.

In the course of the narration it would be suitable to demonstrate samples of the chemical resources used for radioactive decontamination and the radiation monitoring instruments.

Disinfection is defined as the destruction, in the environment, of the agents of infectious diseases in humans and agricultural animals.

There are three basic methods of disinfecting different objects—physical, chemical and biological.

Physical disinfection boils down to cleaning land and buildings. In this case the agents of infection are removed together with manure, food residues, dust and trash. The latter are subsequently destroyed with chemical substances, or burned. As in the case of chemical decontamination, land is decontaminated with solutions of disinfectants, or disinfectant powder is introduced into soil, which is then moistened with water. The same mechanisms are used here as in chemical decontamination.

The most widespread method of chemical decontamination is to use special solutions and, more rarely, free-flowing solids, gases and aerosols. Such substances include 2-3 percent hot caustic soda solution as a general-purpose disinfectant against most viral and bacterial infections; slaked lime in the form of a 10-20 percent suspension; 1-2 percent soda solutions; hot lime liquor. These substances also include chlorine-containing preparations: clarified bleaching powder solutions containing less than 5 percent active chlorine; 10 percent calcium hypochlorite solution against spore-forming bacteria and 5 percent solution against nonspore-forming bacteria; hypochlor, and 2-10 percent chloramine solution. (These preparations are used to disinfect spore-forming and nonspore-forming bacteria as well as viruses.) Phenols are also used: 3-5 percent carbolic acid solution, and hot 1-2 percent solution of sulfur-carbolic mixture. Other resources are available as well—formalin, glycol, hydrogen peroxide, teksnit [transliteration] and iodine triethylene glycol.

When barns are subjected to disinfection by the chemical method, first everything is irrigated with some sort of disinfecting agent, after which the interior is cleaned up. It is not until after this that objects are processed fully with disinfectant solutions.

One of the ways of improving this method is to use aerosols—artificial mists formed by atomizing disinfecting agents. Use of aerosol is recommended in barns that can be sealed off well, since it decontaminates surfaces and the air simultaneously; moreover disinfectant consumption is three to five times lower than when solutions are used.

The biological method entails destroying disease agents by biological resources. It is used for the most part to decontaminate manure, trash and garbage in compost or biothermal pits.

No matter what method is used to process an interior, it is left closed for a certain length of time. The exposure time (the time required for the chemical to act upon the disease agent) depends on the concentration and bactericidal potency of the disinfectant, the type of microorganism and other conditions. After this the interiors are aired, and feed racks and waterers are washed with clean water.

For bacteriological control, 10-20 samples are taken with swabs (from the floor, feed racks, walls and corners) 2-3 hours after processing and sent to the veterinary laboratory for analysis. Disinfection is said to be effective if pathogenic microflora is not isolated in any of the samples.

Proper selection of disinfection resources and methods is extremely important. When we determine which chemical substance to use we consider its bactericidal potency, the breadth of its spectrum of action, absence of odor, and solubility in water. In addition we try to see that it would not spoil articles to which it is applied, that it would be inexpensive and transportable, that it would not accumulate in animals and so on.

Decontamination Equipment and Safety Measures

Veterinary disinfecting equipment is used to decontaminate land and various objects with aqueous solution: DUK (Komarov's disinfection vehicle), LSD (sanitation and disinfection laboratory disinfection vehicle), DDU-V (Vyazkova's disinfecting and shower unit), VDM (veterinary disinfection vehicle), ADSA (truck-mounted disinfection and sanitation unit), ADA (truck-mounted disinfection unit), UDP (mobile disinfecting unit).

Interiors are subjected to aerosol disinfection by means of pneumatic sprayers: TAN (turbulizing aerosol nozzle), SAG (stationary aerosol generator), AG-UD-2 (thermo-mechanical aerosol generator), PAK (portable aerosol outfit).

Land and vertical surfaces may be decontaminated by tractor, self-propelled, motorized and hand sprayers and spray guns. They are washed with a stream of water produced by irrigation and sprinkling machines, tractor- and track-mounted pumps and hydrants.

Land is processed with dry disinfectants using spreading trailers, mineral and organic fertilizer mounted spreaders and manure spreaders; liquid disinfectants are applied by liquid manure spreaders and tanker trucks. A

contaminated area can be plowed under by plows, harrows and rippers. Other equipment can also be employed, both with and without special additional attachments.

All safety measures must be fully observed during the work. Persons decontaminating a combined center of contamination must wear personal protective resources and insulating protective clothing. To keep people from overheating, the established schedules for work in protective clothing must be observed especially carefully in summer. In winter, warm clothing is worn beneath protective clothing, and a helmet liner is worn on the head. Personnel must make sure that protective resources are always serviceable; if not, they must be replaced immediately. Exposure doses are monitored by individual dosimeters.

The following are prohibited during decontamination: removing and unbuttoning protective resources, lying down or sitting on contaminated objects or leaning against them; eating, smoking, drinking water and resting at work stations. Such things can be done only in a specially allocated area.

Decontaminating agents and equipment must be handled with caution. Active solvents should be prepared only in the appropriate containers and in areas specially allocated for these purposes. Used rags and other materials that had been in contact with contaminated objects must be decontaminated and then buried.

Personnel working in a center of contamination must be immunized against especially dangerous infectious diseases, and they must also undergo preventive antidote therapy. Formation commanders are responsible for observance of safety measures.

At the conclusion of the lesson the instructor answers questions from the students, hits upon the most important points and suggests literature.

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11004

Lt Gen Likhanin Responds to Letters on Housing Problems

*18010009a Moscow KRASNAYA ZVEZDA in Russian
11 Sep 87 p 2*

[Article by Lt Gen N. Likhanin: "And Back to the Housing Issue"; first paragraph is Krasnaya Zvezda introduction]

[Text] "And Back to the Housing Issue": Such was the title of a survey of letters published in this newspaper on 3 July. The survey was examined by the Main Billeting Directorate of the USSR Ministry of Defense. The editor's office received a reply signed by Lieutenant General N. Likhanin. In particular it mentions that in general, as with other earlier publications, this survey correctly states a number of the most important problems associated with the need for accelerating solution of the housing problem in the army and navy.

The housing problem, Likhanin notes further, continues to be extremely acute. The leadership of the USSR Ministry of Defense and of the Main Political Directorate of the Soviet Army and Navy, and the commands and military councils of the districts and fleets are devoting constant, unweakening attention to its solution. Owing to this, the housing conditions of servicemen improved noticeably over the last few years. The overwhelming majority of their families are living today in modern residential buildings with all of the communal conveniences, not only in the large cities but also in remote garrisons. Resettlement of a sizable number of families that had formerly resided in barracks and in basement apartments is practically finished. The time servicemen arriving for work at new locations must wait for housing has decreased to a few months in many garrisons of a large number of the districts and fleets.

But at the same time, it is asserted in the reply, there are still garrisons and military units in almost every military district and in the navy in which servicemen must wait for long periods of time, sometimes years, before they receive housing, experiencing considerable hardships in this connection. This is eliciting serious concern.

In our efforts to solve the housing problem we need to turn special attention to fair distribution of housing and to ensuring widespread glasnost in this issue. Violations of housing laws and of the principle of social justice still occur unfortunately, as do blatant abuses.

One of the main reasons behind these negative phenomena is the poor work of the housing commissions of garrisons and military units. Another is the absence of glasnost and real social control over the distribution of housing.

Efforts to check out the correctness with which living space is utilized and distributed became noticeably more active in 1986-1987. Those guilty of violating housing

laws are being punished strictly, including under criminal law. Workers of billeting organs of the USSR Ministry of Defense and of military procurator's offices recently conducted such inspections in the Transbaykal and Transcaucasus military districts.

The USSR Ministry of Defense's entire housing pool was inventoried in late 1986 and early 1987. But in a number of places the results of the inventory were inconclusive owing to an irresponsible attitude toward it on the part of garrison chiefs. An additional inventory will be taken in such garrisons.

As far as the suggestion made by the survey's author is concerned—that the existing statute on the procedures for providing housing space in the army and in the navy must be rewritten and that all documents pertaining to housing issues need to be published in a single collection, I have this to report:

Taking account of some amendments that have been introduced, the cited statute, which reflects only specific aspects of housing assignment in the army (navy), does not conflict with existing legislation.

The principal documents that must be used as guidelines by housing commissions and officials dealing with the problems of housing for servicemen are, besides the statute mentioned above:

the Basic Principles of USSR and Union Republic Housing Legislation;

the housing codes of the union republics;

the Regulations Governing Maintenance of Records on Citizens Requiring Improvements in Their Housing Conditions, and on Providing Housing Space Approved by the Executive Committees of Kray and Oblast Councils of Peoples Deputies, and by the Councils of Ministers of Autonomous Republics and Union Republics;

orders and directives of the USSR minister of defense, including those citing decrees of the CPSU Central Committee and the Soviet government on housing issues as guidelines.

A new Statute on Procedures for Assigning Housing Space in the Soviet Army and Navy is being drafted, and it will be completed after the USSR Council of Ministers adopts some legislative and normative acts making significant changes in existing housing law.

The problem of publishing a collection of guidelines on housing issues will be solved in similar fashion.

The survey offers the reproach that a special document determining the housing rights of servicemen with large families does not exist. Nor should such a document exist, because this issue is regulated by Article 20 of the Basic Principles of USSR and Union Republic Housing

Legislation. This article establishes that large families and the parents of twins needing better housing conditions are provided housing space on priority. And the housing codes of the union republics define large families differently (three children in the RSFSR, five in the Kazakh SSR, and five or more children in the Armenian, Tajik and Kirghiz SSR).

It should be kept in mind that according to existing legislation, servicemen transferred into the reserves or retired due to age, health or a reduction in forces must be provided living space on priority by the executive committees of local councils of peoples deputies, but not more than 3 months after arriving at a place of residence, selected with regard for the existing registration procedure.

The Main Billeting Directorate supports the editor's office in regard to addition of the billeting unit chief to the list of offices to be visited by officers processing out. The purpose of this would be to prevent loss of control over apartments vacated by them.

In 1984-1985 the USSR Ministry of Defense examined the question of compensating servicemen for rental of housing space several times on the initiative of the Main Billeting Directorate. However, this issue never was resolved positively owing to objections from the Central Financial Directorate of the USSR Ministry of Defense.

In this connection a decree was adopted allowing extended-service servicemen, sea-going and shore-based warrant officers and officers on active military service (and their families) to register for housing space with other persons or with the military unit irrespective of the amount of housing space for which they qualify, until such time that housing space is made available by the established procedure.

It is evident from responses locally that this measure has made it significantly easier to find housing, and it has eliminated many of the hardships associated with finding employment for the families of servicemen, providing medical services to them and enrolling children in schools and preschool institutions.

Reserved housing space is also actively used to temporarily house servicemen relocating to a new place of work. According to data from the military districts and fleets over 76 percent of such reserved housing is occupied by servicemen; the rest of the space is either occupied by family members who had not departed for various reasons, or it is used to store the personal belongings of the renters of the reserved apartments (this pertains to one-room apartments as a rule).

Cases in which servicemen rent reserved apartments to persons having no relationship to the USSR Ministry of Defense unfortunately still arise in a number of garrisons.

In connection with the discussion carried on in Krasnaya Zvezda the deputy troop commander of the North Caucasus Military District for construction and billeting is directed to analyze whether or not it is legal for civilians to live in housing belonging to the USSR Ministry of Defense.

11004

Current Military Housing Shortage Averages

10-12 Percent

*18010009b Moscow KRASNAYA ZVEZDA in Russian
20 Aug 87 p 1*

[Article: "Housing Must Be Built Faster and Better"]

[Text] Solution of the housing problem is one of the most timely and urgent social tasks. The party designated a specific deadline for this task's completion: By the year 2000, practically every family should be furnished with a separate apartment or a house of its own. The housing shortage is especially acute in the army and navy today: It averages 10-12 percent, while in some regions up to a third of the families of servicemen do not have apartments. It is clear that the housing problem in the garrisons cannot be solved without the active and effective assistance of local party and soviet organs. At the same time the role of capital construction by the USSR Ministry of Defense is large in this area as well. This is why military builders and planners and workers of construction industry enterprises must increase their efforts sharply today. As was emphasized at the June CPSU Central Committee Plenum, all reserves must be placed into action in order to accelerate resolution of the housing issue.

Many military construction organizations that are erecting houses quickly and well, utilizing both working time and construction materials efficiently, can be named right now. Among them are the building collectives headed by lieutenant colonels V. Isayev, A. Meshcheryakov and V. Tikhonov. As an example the work supervisor's section headed by Lieutenant Colonel K. Ringevich is fulfilling its planned quotas on a regular basis; moreover the cost of its housing is the lowest in the USSR Ministry of Defense. Brigade cost accounting is widely employed, and over 60 percent of the total volume of construction and installation work is carried out by the contract method. Manual labor has been eliminated from a number of stages of construction owing to effective small-scale mechanization. Housing construction is under the constant control of the party committee and the trade union organization.

If we analyze the progress in fulfilling the annual plan for housing construction, we would clearly see that military builders of the Carpathian, Belorussian and Leningrad military districts are working rhythmically. The Turkistan and North Caucasus military districts stepped up the pace of housing construction noticeably in the last

half year. But unfortunately there are also many diametrically opposed examples in which planning assignments are not being met and housing construction drags on for years. The fact that the quantity of housing placed into service in the Siberian and Volga military districts in 6 months was less than a third of the annual quota elicits concern. Things are not going well in the Transcaucasus Military District.

Falling behind the work schedule and postponing placement of most housing into service to the end of the year are among the causes bringing such a situation about. When the work is organized in this way, rush work and crash campaigns become unavoidable, together with all ensuing consequences. We can no longer tolerate the "chilly" attitude of some commanders, political organs, party organizations and production organizers toward the housing problem. Resourceful, persistent work and efforts to find reserves by which to accelerate housing construction do not always follow general discussion. Construction industry enterprises do not always utilize their full output capacity, and their reconstruction and reequipment is proceeding too slowly. Work in two or three shifts at plants and construction sites where it can be organized has not yet become the rule. The utilization factor for equipment and machinery is low. Not enough attention is being devoted to effective forms of labor organization and stimulation. Timid steps are being made in the experiment to create house building combines initiated by the Main Military Construction Directorate of the USSR Ministry of Defense.

All of this is leading to more than just quantitative losses, which are measured in the thousands of square meters of housing space not placed into service. Low quality of construction also means considerable expenses that sometimes result in irretrievable material and moral losses. Sometimes the state acceptance commissions close their eyes to unfinished work in new houses that keeps new occupants from moving into their apartments due to untenable living conditions. Evidence of this can be found in particular in the editor's mail. "Water leaks into the apartments through wall panels and porch overhangs, causing plaster to fall off the walls," write, as an example, L. Tkachenko, V. Kubitskiy and other residents of an apartment building erected by builders of the Kiev Military District. "In winter the temperature in the apartments stayed at 7-13 degrees...." Such complaints arrive from distant and nearby garrisons, including from officers having to serve combat duty in difficult conditions.

All measures must be taken to conclusively eliminate all complaints about housing erected by military builders. And this requires considerable organizational effort, and solution of a large number of economic and technical problems. At the same time commanders, political organs and party, trade union and Komsomol organizations should devote the most persistent attention to instilling workmen's honor and professional pride into

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young builders, and capitalize on experience accumulated in the best cost accounting brigades. A new, improved form of labor organization—the collective contract—is blazing its way today at military enterprises and construction sites. Its active, wide introduction is one of the most important prerequisites for a transition to new ways of doing business. Possibilities for raising the effectiveness of housing construction also need to be sought along this path. The work supervisor's sections headed by colonels S. Lomashko, V. Avzin and V. Kuzmenkov, and Lieutenant Colonel A. Meshcheryakov are actively introducing the collective contract. Experience accumulated in these collectives is useful, and it requires the fastest possible dissemination. This is an urgent task of all executives and party and trade union collectives of military construction organizations.

The public can make a certain contribution to solving the housing problem. An initiative of the leading collectives of the AvtoVAZ [not further identified]—contributing not less than 4 days of uncompensated labor to the construction of social, cultural and personal service facilities—found support in the army and navy last year. Housing in a number of the garrisons was placed into service ahead of schedule as the end result of this patriotic movement. The labor enthusiasm of the people and their political activity must be kept alive, and embodied in specific creative work. Very much depends here on the active position of the command, political organs and party and Komsomol organizations.

Erecting housing faster and better, and successively implementing the party's plans in this area are tasks of enormous political, economic and social importance. In the army and navy they are inseparably associated with the mood of the people, with fulfillment of their official duty and, in the final analysis, with further growth of troop combat readiness.

11004

Readers Discuss State of Military Medicine 18010009c Moscow KRASNAYA ZVEZDA in Russian 23 Sep 87 p 2

[Article: "Always Remembering the Individual: Discussion of the Plan of the CPSU Central Committee and USSR Council of Ministers for Restructuring Public Health"]

[Text] How do we significantly upgrade the quality of the treatment and prevention of disease? This is something our readers are thinking about today. That they are interested in these problems is evident from the letters they write about the occupational training provided to physicians, the equipment available at medical institutions, the relationship between science and practice, and the ways of surmounting stagnation in this area. One of

these ways is to fight against bureaucracy and red tape in the day-to-day work of medical workers. Two letters on this topic from physicians representing different generations are published below.

"Here Is How We Did It at the Front...", by Maj Med Serv (Retired) G. Ivanov

The plan for restructuring public health validly raises the issue of scientific organization of medical labor. The amount of unnecessary paperwork the physician must deal with today is astounding! In some cases physicians spend up to 50 percent of their time filling out forms, "for the procurator" as they say. Does this make it any better for the patients?

I remember how at the front we used to fill out forward area casualty tags in just seconds by underlining the soldier's wounds preprinted on the tag—shrapnel, bullet, abdominal etc. This little card made a big impact: Consider how many casualties the doctors returned to action! When the dispensary treatment system was introduced after the war, a dispensary examination form appeared in the treatment book. It took just a minute to flesh out this "skeleton." Why not introduce such a form for initial reception of patients today? Much has already been said about this. And after all, we do have great examples of ideas that changing things for the better in this area. As an example colleagues of the Kiev Institute of Cardiovascular Surgery, where N. Amosov is now the director, use a formalized patient history in which the physician underlines things and fills in numbers. He doesn't have to write much at all on the form. And it only takes a tenth of the time! The information is easy to read, it is accurate, and it is easily computerized. And most importantly, the patient benefits. I suggest minimizing the quantity of documents and reports required of the medical worker.

"Curing Red Tape." by Capt Med Serv A. Kostenetskiy, Regiment Medical Service Chief, Red Banner Ural Military District

Of all medical personnel, who is closest to the soldier? I'm sure I would not be wrong if I said it was the troop physician. Because he is well aware of his moods and concerns, and he is the first to provide the soldier medical assistance when he needs it. Special attention is being turned today as perhaps never before to military medicine, to its development, to raising the prestige of the troop medical worker and to freeing him of functions unrelated to medical practice. As a troop physician I know how many shortcomings we still have in our work. There is much more that we can do for the health of the soldiers. But of course, the success of our efforts depends on more than just our professionalism and our desire to work better. In my opinion one of the things that is keeping us from working properly is the preponderance of all kinds of paperwork, often redundant. A regimental physician must deal with around 50 different forms. And of course, this leaves practically no time to actually do

what these documents require. And the flow of paper is still running strong. A new form for monthly and quarterly reports has just been introduced. On the surface it seems to have a noble purpose—computerizing the data—but in my opinion it only adds to the paperwork.

There is one other "painful" issue associated with these same papers. It is the avalanche of all kinds of planned and unplanned inspections that keep the unit's medical service in constant turmoil and elicit the unavoidable last-minute rush. Unfortunately the inspectors often judge the quality of therapeutic and preventive work on the basis of document management. And so we are forced to put all of our effort into paperwork on the eve of each inspection, which takes us away from the most important part of this whole thing—the individual. This is why the bitter joke that it is better to write something down three times than to do something once is being passed around medical workers. I suggest that we reduce the number of the various forms of medical documents and reports, and condense them as much as possible down to, for example, a patient history. This would permit the troop physician to devote more effort to the struggle for the health of the soldiers.

11004

Ministry Experiment With 'Collective Contracts'
18010009d Moscow KRASNAYA ZVEZDA in Russian
29 Sep 87 p 2

[Article by Lt Col A. Meshcheryakov, Red Banner Odessa Military District: "Discipline, Economy, Order: A UNR Adopts the Collective Contract"; first two paragraphs are Krasnaya Zvezda introduction]

[Text] The collective contract is persistently making its way into business practice. Recently the USSR Ministry of Defense adopted a decision to carry out an experiment on introducing this progressive form of labor organization at military construction sites. Construction administrations of the Belorussian and Moscow military districts and seven military construction organizations will take part in it.

The experiment is based on experience accumulated in the leading collectives of military builders. Among them is the UNR [work supervisor's section] headed until recently by Lieutenant Colonel A. Meshcheryakov. Today he shares his thoughts on the ways and unique features of introducing the collective contract into the army and navy.

In 1984, when I was the director of the UNR, the organization accumulated a certain amount of experience in introducing the brigade contract. Three integrated brigades headed by Soviet Army workers V. Barkalov, L. Skorba and L. Chvojda achieved good work results. Nonetheless, it could not be referred to as work oriented on the end result. Many acute problems remained unsolved. For example supply interruptions

derailed our efforts time and time again. In the final phase of construction, when only the low-cost jobs remained, the output and consequently the pay of the workers decreased noticeably.

Nonetheless, this unique experience did help us a great deal when we put our efforts together to find approaches to working in a new way. In particular we began by implementing the principle of "working with an orientation on the end result" in the same brigades. Our reasoning was that in a brigade, each individual is in the public eye, he has an interest in the daily concerns of his comrades, and in the brigade it would be easier to solve the production, social and moral problems that arise. Some of these problems were clear right from the start: Engineers and technicians still appeared to hold themselves aloof from the common effort, and they were not directly interested in raising labor productivity. The first thing we did was to introduce work supervisors and foremen into the brigades. We started evaluating their work on the basis of the coefficient of labor participation. And the brigades themselves, which now included military builders as well, were increased in size to 50-60 persons.

We became persuaded very quickly that we were on the right track. Of course, the greater material interest of the people played its role. But most importantly the atmosphere itself changed: The collective principles of production management were now the rule. Questions like "Why should you want more than anyone else?" simply became irrelevant. It was then decided to push events along, and in early 1986 we submitted a proposal to the district's construction administration—to institute the collective contract in all UNRs. Our eagerness was quickly doused there. They told us that there was no need to hurry, that things had to be thought out carefully, that supposedly the collective was not yet ready for such changes.

This meant that we had to slacken our pace, but we kept on searching. And then in the fourth quarter of 1986 three sections headed by V. Kapyshev, Ya. Kravchenko and L. Neyman adopted the collective contract as an experiment.

We did have our skeptics, of course. Some division workers and engineers did not believe that we could be successful. They tried to evade the additional load under various excuses. But owing to enthusiastic supporters who actively joined the effort to organize and conduct the experiment—persons such as A. Bekker, V. Zhukova, V. Podymov and others, we were able to surmount the difficulties. By as early as the end of the year the labor productivity of these sections grew by 30-35 percent, and wages increased. The wage system we employed, in which pay was made independent of work orders, justified itself completely.

I think that our success was predetermined by the fact that the role of the engineer's labor was increased not just in words but in deed. Section chiefs, work supervisors and foremen began to play the main role in production. In many ways owing to this, the collective of the UNR successfully completed its annual program, and it was awarded the perpetual Red Banner of the USSR Ministry of Defense and the central committee of the trade union of construction and construction materials industry workers.

Another four sections adopted the collective contract at the beginning of this year. They are working rhythmically and effectively. Someone reading all of this might ask: Did everything really go so smoothly, without snags, without a hitch, didn't any kind of difficulties arise? Of course they did, and they are still around. To surmount them we would need the effort of not the individual sections but of the entire collective of the UNR, and of higher levels of authority.

It all appears quite simple. The volume of work and the time to complete it are set for the labor collective, and a single wage fund is established. In this case the collective is given complete independence in selecting the specific forms and methods of organizing its labor. If it completes its quota with fewer people, wages benefit. And on the other hand poor work carries with it a personal sacrifice.

This is why every laborer, engineer and white collar worker is objectively interested in understanding the new management conditions well. Being interested is one thing, but as we persuaded ourselves quickly, far from every executor is capable of making competent decisions at his work station. According to the statute on the collective contract, the management council should contain not less than 60 percent laborers and military builders—that is, direct executors. But they are precisely the ones who lack elementary competency in economics.

What is it in my opinion that a worker should know today? First of all he should know the fundamentals of cost accounting, and funds are formed out of profit. Second, he should know what specifically affects the size of bonuses, and what he needs to do personally to increase them. While in former times we basically appealed to the worker in general terms, exhorting him to economize on materials and to build quickly and well, today we place him in conditions in which it is disadvantageous for him to work in any other way. We became convinced that we could not go very far without providing some effective training in economics. It is not enough to just explain the content of economic concepts such as profit, profitability, self-financing and self-support. These concepts must also be tied in closely with the daily work of the UNR, the sections and the brigades. But to be honest we are still not satisfied with how we

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have organized this economic training. The party committee and the trade union and Komsomol organizations are not contributing much. Everything is being done basically through the efforts of the administration.

Foremen, section chiefs and brigade leaders train the workers in our organization. And as it turns out, they themselves are not well versed in many of the fine points of the economic mechanism. But it is easy to understand why this is so: There are no textbooks, manuals or instructions on training methods. How do they prepare for the lessons, where do they get the materials? What it comes down to is that we have to answer these questions ourselves, and rely on information from periodicals.

A report in Krasnaya Zvezda from the Belorussian Military District on the work of a builder collective headed by Colonel S. Lomashko was interesting reading. In it, sanitary engineers complained that general contracting organizations operating on the basis of obsolete methods were making it difficult for them to work in the new way. It would be nice to have such a subcontractor, I thought. We could work together well. But unfortunately our situation is the exact opposite: Our subcontractors are the ones who are in no hurry to change.

Our entire UNR is to adopt the collective contract in the fourth quarter of this year. Besides problems that we need to solve locally, there are also ones which depend on the upper echelons of administration. Some of them simply cannot be moved to the back burner. Workers of all UNRs are presently loaded to the limit, but it would

have been nice if they were loaded with productive labor. Half of the working time is wasted on reports. The list of these reports would take up several pages of typewritten text. This is why engineers of the administration's divisions feel so uncreative, having to fill out numerous reports instead of directing their efforts into areas where they can do some good. We are ready to halve the quantity of paperwork right now, and I am sure that labor productivity would increase as a result. But the higher command feels that things cannot be done any other way. I on the other hand feel that we can and must do things in a different way. We have already lost so much time.

Just imagine how much paperwork we churn out in the struggle for discipline, economy and order! Consider also that a person need not be persuaded to manage resources carefully if he feels that these resources are his own. This means that we must create such conditions in the collective right now. The era of unwarranted leveling of wages and administration by injunction is gone forever, and the fair and understandable principle of receiving a reward commensurate with one's work is becoming the rule. I am convinced that this principle embodies the most powerful force of acceleration. Our experience in working with the collective contract says that this is so.

From the Editor: It was announced after this article was prepared for publication that Lieutenant Colonel A. Meshcheryakov was appointed chief of the construction administration of the Odessa Military District.

11004

Editor Discusses Western Antiaircraft Systems
18010196d Moscow VOYENNYYE ZNANIYA in Russian No 4, Apr 87 p 19

[Article by Capt 2d Rank Yu. Kryukov and Capt 3d Rank M. Kozhevnikov based on foreign publications; first two paragraphs are VOYENNYYE ZNANIYA introduction: "Creators of the Tartar and Others"]

[Text] "Dear editor! I often read reports in the press that the Pentagon and the ringleaders of NATO are supplying surface-to-air missiles to counterrevolutionary groups in Angola, to Afghan dushman and to other imperialist mercenaries, and that the U.S. Navy is using antiaircraft guided missile weapons to intimidate governments disliked by the 'hawks'—Libya for example. I would like to learn about this form of armament in greater detail."

V. Malinin, Zhukovskiy, Moscow Oblast

The article published below is a reply to Comrade Malinin and other readers interested in this question.

Swift growth of naval strike forces and their preparation for combat activities involving the use of antiaircraft guided missile weapons in sea and ocean theaters of military operations are typical of the navies of the USA and other countries of the aggressive NATO bloc. The first generation of shipboard antiaircraft guided missile systems were developed against aviation. These included long and medium range missiles—Talos, Terrier, and Tartar (USA), Seaslug and Sea Dart (Great Britain) and Masurka (France).

The Talos antiaircraft missile complex is designed for installation aboard large naval ships, chiefly cruisers. The first ship equipped with this complex and expensive technology was the cruiser "Galveston." The complex includes control resources (missile guidance and target tracking radar, and a semi-active radar homing head, a twin launcher and missiles. According to the foreign press poor resistance to interference, high manufacturing and operating costs, large size and weight, and low effectiveness at maximum range are significant shortcomings of this system. This is why such long-range systems have not enjoyed wide application.

Medium-range antiaircraft guided missile systems are intended to defend task forces against airplanes and antiship cruise missiles outside the effective zone of air defenses. They include for example the Terrier antiaircraft missile complex, which is installed aboard cruisers, carriers, destroyers and frigates. It consists of a launcher and guidance radar. Terrier-1 had beam-writing television guidance. Terrier-2 had the same type of guidance except that in the vicinity of the target the missile switches to semi-active radar homing. Range is up to 37 km. The maximum velocity of the missiles is around 900 m/sec.

The Tartar antiaircraft missile complex was developed in the USA as armament for convoy and task force escort vessels. It possesses a launcher, a missile storage and launch preparation system, and a fire control system. It is guided to the target similarly as the Terrier-2, but in contrast to the latter a jettisonable booster engine body is absent from the Tartar. This made it possible to reduce the length of the missiles and store them more compactly in the ship's hold.

The British Navy possesses several medium-range antiaircraft guided missile systems. In particular its destroyers and frigates are armed with the Seaslug antiaircraft missile complex, which includes three radar stations—detection and target indication, target tracking, and beam guidance radar. The complex's missile is supersonic, two-stage with four side-mounted jettisonable booster engines. Range is up to 40 km, maximum velocity is 1,030 m/sec, and the ceiling is 20-23 km.

The Sea Dart antiaircraft guided missile system was created as a replacement for the Seaslug with regard for the experience of the latter's operation. It is intended for use against air strike resources—bombers, fighters, ship-to-ship and air-to-ship missiles—and for use against ground and water surface targets. The system includes a guided missile, a launcher and target illuminating radar. Various modifications of automated control systems and communication resources are used for control. All operations—from launch preparation to target kill—are carried out automatically, without the participation of an operator, who does nothing more than give the command to load the launcher and connects one of the target illuminating radars to it.

Ships of the French Navy are armed with the medium-range Masurka antiaircraft missile complex. The complex's two-stage missile is outwardly similar to American missiles (to the Terrier-2 antiaircraft guided missile). Two variants are known—with television and radar semi-active guidance. The equipment consists of a twin launcher and two radars—detection and target tracking, which ensures simultaneous guidance and launching of missiles at an interval of 5 seconds, and target destruction at an altitude of two dozen kilometers.

In order to raise the effectiveness of the air defenses of task forces, the command of the U.S. Navy implemented a program to modernize existing complexes and create fundamentally new systems. The first direction foresees improvement of antiaircraft guided missile systems. The new Standard antiaircraft guided missile is being created, the target interception process is being automated, more up-to-date radar and weapon control resources are being added, and high-speed digital computers are being utilized. Modifications of the Standard rocket have made it possible to use it with previously built launchers, as well as with the missile storage and handling systems of the Terrier and Tartar missile complexes.

The fundamentally new Aegis antiaircraft guided missile complex is also being developed. It is intended for use against fast-moving targets with a low effective reflecting area, and when radar suppression resources are employed. It can intercept up to six targets flying from different directions and destroy them at ranges of 40-50 km and altitudes of up to 20 km. The complex includes a polyfunctional radar and various systems—command and decision making, weapon and fire control, combat readiness testing, and a launching equipment system. The Standard-2 missile developed for the Aegis antiaircraft missile complex has a number of improvements increasing its range and resistance to interference. The electronic circuits are made from solid-state components, which significantly raises the missile's reliability.

The Aegis launcher is universal. It can launch both Harpoon ship-to-ship guided missiles and ASROC anti-submarine missiles. It is fully automated and computer controlled, ensuring a high rate of fire.

Short-range antiaircraft weapons are used to destroy airborne targets that penetrate through the zone of long- and medium-range aircraft and antiaircraft missile cover. Short-range antiaircraft missile complexes were found mainly aboard ships of the British Navy for a long period of time, but now almost all NATO countries have recognized their important role. Short-range antiaircraft guided missile systems such as the Sea Cat (Great

Britain), Sea Sparrow and Sea Chaparral (USA) and Sea Indigo (Italy) do not fully satisfy all requirements of protecting against low-flying antiship missiles. They are undergoing improvement to sharply increase the probability of target detection and kill, reduce the system's reaction time to 2-3 sec, and increase the fire capabilities.

The English Sea Cat shipboard antiaircraft missile complex is a widespread system. Over a hundred ships of a number of NATO countries are armed with its modifications.

Summarizing the above, it should be concluded that the military leadership of the aggressive NATO bloc is devoting serious attention to raising the effectiveness of ship antiaircraft guided missiles. They form a unique shield for the navy, under the protection of which piracy may be inflicted in any region of the World Ocean. But imperialists must consider that any action they take will elicit a counteraction: The navies of our country and countries of the socialist fraternity will be armed with corresponding weapons.

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